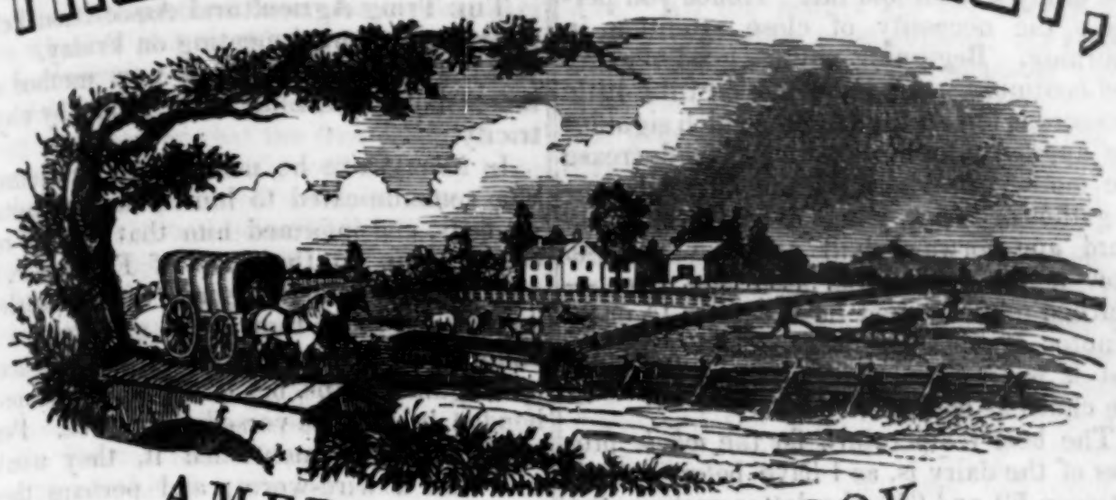
THE FARMERS' CABINET,

AND



AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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BY JOSIAH TATUM,

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For the Farmers' Cabinet.

To make Good Butter.

MR. EDITOR.—There is nothing requires more care than the making of good butter, and nothing is more wholesome when it is good. Aware of this, I found that strict attention, care and perseverance on my part, were ultimately crowned with success. Good butter ought to be made in winter, as at any other time. The heat of summer is as hard to contend with as the cold of winter—and this convinced me that there was a certain degree of heat more favourable than another; this, after many trials with the thermometer, I thought to be about 60°. I will relate to you some of my discoveries and observations, which no doubt will seem rather stale among so many good butter makers, but let me premise that these were in my own dairy and under peculiar circumstances.

First objection;—The milk was often left too long standing in the bucket before strained and put away. I think the sooner it is put away the better, and should not be disturbed while the cream is rising.

Second objection;—The milk pans—of stone ware—were never warmed, but frequently taken from the shelf out of door, and the milk—already cooled by standing—strained into the almost freezing pans—the consequence was, the too chilled milk would stand a long time without casting its cream, and being skimmed at regular intervals, we fell short of the proper quantity of that necessary article, and of butter.

Third objection;—The skimming process was not carefully done; too much milk, and in the summer too much "clobber," clopper, or "clabbaugh," or whatever it may be called, is thrown in with the cream, which in summer, gave a rancidity to the churning, creating a difficulty, and sometimes entirely preventing the gathering of the butter, and in the winter filling the churn to no purpose.

Fourth objection; — Inattention while churning; leaving the churn after having commenced; stopping, as they would say, to rest; not regular enough in turning—we use a barrel churn. All these things tend to prevent the coming of the butter in a proper time—and long churning tends to deteriorate the quality. I found too, that after the butter *had* come, instead of moving the paddles slower to allow it to gather, they continued the same quick movement, keeping up and even raising the

temperature till it melted, or went back, as one of my women told me. Hence you perceive the necessity of close attention in churning. Beginning with a good velocity and continuing the same motion till a little pressure is felt on the handle, which signifies the approach to butter, and then decrease the motion gradually till the butter begins to gather or break, when a few turns backward and forward will end the process. Now if the cream was good and sweet—churned properly, and has come in 15 or 20 minutes, I will warrant good butter so far. But it is as often spoiled after taken from the churn as before.

The best temperature for the *whole* process of the dairy is, as I have before stated, between 50 and 65°, the latter perhaps the best. This winter I brought my milk to the house, appropriated a closet to it in a room where I have kept the temperature to an average rate of 60°. The past winter, however, has been very mild, and during some of the warm days I observed the milk turned within twenty-four hours; during which time I leave the milk to cream. My observations after taking the butter from the churn and objections were these:

First objection;—They would leave the butter too long after churning in the buttermilk. I think as soon as the vessels for working it can be made ready it is best to take it out and rinse it off in strained water, and then commence the working; do not let the vessels be too warm—nay cool.

Second objection;—Working by hand—the short scoop paddle being the neatest and best. Working does not mean paddling it over and over, but means pressure; and when carefully done, two or three times working over by small parcels, will be quite sufficient: the best evidence of a sufficient working, however, is the purity of the water with which it is washed; when it runs clear as a bell then stop. Salt to the taste next, is a safe recommendation; but I put in half an ounce to every pound, which seems to be best suited to the taste of *my* customers. The common Liverpool salt, free from motes and rolled very fine, is the kind I use. I would recommend *now* a sufficient paddling over to mix the salt well, and after standing an hour or half hour, cut it in half pound prints, and observe if it be streaky—which is occasioned I think by the salt abstracting the colouring matter of the butter—work over each print by itself, and then if the butter is not fit for any table, I'll give up.

Yours truly,

F. H.

Baltimore, March 28th, 1845.

Electricity in Agriculture.

The Tring Agricultural Association held their fourth annual meeting on Friday.

Mr. Gorden described a new method of increasing the fertility of the land—by electricity.

In Morayshire he met with a gentleman who communicated to him many agricultural facts, and informed him that he had recently seen, on the farm of Findrassie, a plat of land which seemed to bear barley and clover as if they were growing on a dung-hill; and that that effect was produced by singular means, but easily to be comprehended by persons versed in science. Perhaps, when he mentioned it, they would call him a wire-worm; and perhaps they would be astonished if he told them that the most successful agriculturists might be the poachers; for who would deny that they well knew how to lay down wires? He came among them armed only with a pole or poles eleven feet long, a coil of common wire and a compass; and with these weapons he trusted he should, in a few minutes, convince them that he could wield an agricultural power not to be despised. But to proceed. He wrote to the proprietor of the farm at Findrassie, near Eglin, (Dr. Forster—not Faustus,) to open, with a lecture on the subject, a large room which he had built for agricultural purposes in the county of Aberdeen. Dr. Forster, however, was not able to do so; but, with a practical liberality which marked him a true agriculturist, he was kind enough to write an account of the subject, which was the novel and surprising one of the influence of electricity and galvanism on the growth of plants, as applicable to agriculture. Many years since, Mr. Forster read in the Gardener's Gazette the account of an experiment made by a lady, which mainly consisted in a constant flow or supply of electricity—to be afforded by a common electrical machine—to proceed from a summer or garden-house, and which was diffused, by wire, to a fixed portion of the surrounding ground; and the effect was, that vegetation did not cease in the winter on the spot under the influence of this wonderful power; and that what snow fell during the continuance of the experiment never remained, as it did on the rest of the garden around. This impressed Mr. Forster very much, and induced him to place a small galvanic battery in action on a grass-plot; and although the power from it was very small, still the effect produced fully confirmed the lady's experiment. This, and other facts which Mr. Forster collected, led him to think that the electricity of the

atmosphere—a constant current of which was found to proceed from east to west over the whole of this earth's surface—might, by some arrangement, be usefully employed in agriculture; for Mr. Crosse, of Taunton, had long since proved that the free electricity of the air might be easily collected by wire suspended on poles of wood, at many feet from the earth's surface—the direction of the wire being due north and sonth by the compass; and many very interesting and important facts and experiments had been recorded by Mr. Crosse, and many collected from a careful observance of the electricity proceeding from the suspended wire.

Mr. Forster next placed two poles four feet high in his front lawn, which had been recently laid down with chevalier barley and grass, after draining and sub-ploughing it; and over those poles which were due north and south of each other, he stretched a common piece of iron wire, fixing the two ends of it to stout wooden pins, driven in close to the earth; and on the edges of the plot of eight English poles, and around the edge, which were straight lines, he sunk, about two or three inches beneath the earth, two wires of equal length, the ends of which were fixed and in contact with the two ends of the suspended wire, which were meant not to be too tight, for its contraction, in cold nights, would break it in two, or pull away the fixtures, and thus defeat the object. Mr. Forster formed two of these plots for experiment, measuring eight square poles each, and then proceeded to criticise his work: and, to do so accurately, sought the aid of "Noad's Popular Lectures on Electricity and Galvanism;" and almost the first half hour's perusal showed him, that there was such an error in one part of his plan as would effectually defeat his intentions. This was, that the point of a blade of grass or young corn-plant has the most extraordinary faculty or power of attracting or appropriating to itself all the free electricity present, at four times the distance that the finest point of metal would or could; so that, when the points of the barley-plants should reach one foot high, all the electricity that the suspended wire might before that have collected and conveyed through the buried wire to the roots of the plants, would be abstracted by the points of the barley; and thus the suspended wire, getting nothing from the air, could not of course supply anything; by which all the induced electrical influence would cease.

Mr. Forster, therefore, next day placed poles eleven feet high above the surface, with wires, &c., exactly the same, except that the space surrounded by the buried wire was twenty-four poles, English measure. All the results are yet imperfectly known; but these were evident: the barley plants on the two smaller plots—of eight poles each—soon became darker in colour, and grew faster until they had attained to about a foot in height; the darker green colour then gradually disappeared; and, at the end of a fortnight after, there was no perceptible difference but in the height of the young barley-plants; and even this ceased to be very apparent as the crop advanced. When the barley of the larger or twenty-four pole plot was six inches high, it assumed the same lively dark green, and grew faster than the surrounding unelectrified barley-plant; and this difference it maintained up to the last—except that the colour, of course, in time became yellow; and it was curious that this change occurred later than in the rest of the crop. The number of stooks or shocks was also greater, and each larger when reaped; the ears from one grain of seed were more numerous and longer; the corn, also, was larger and harder.

To make assurance doubly sure, Mr. Forster fixed to the short four feet poles of one of the smaller plots, pieces of dry pine wood eight feet high, and suspended two wires to them—one at that elevation, and another a foot lower down—and was pleased to find that, after some time, this plot partially resumed its former darker green colour. The experiment has also been tried at Liverpool with great success, on potatoes; the crops being much larger than on the other parts of the land. It was the opinion of those scientific persons of whom he had inquired, that even Professor Liebig was not aware of the application to agriculture of this discovery. It seemed, then, that the meeting was now in possession of valuable details, which were known to very few persons in the whole country. He hoped some gentleman would try the experiments, and write upon the subject; for he had written to the Royal Agricultural Society to offer £30 for the best prize essay on galvanism and electricity as applicable to agriculture.—*London Spectator.*

From Ellsworth's Report for 1844.

Cultivation of Celery.

New York, December 12th, 1844.

Dear Sir,—The cultivation and growth of celery, that most excellent and wholesome winter vegetable, require the close attention of the gardener to bring it to perfection.

A practical gardener will soon learn the art; and for the benefit of those who have

yet to learn it, I beg to hand you the result of my own experience for the last twenty-five years.

In this country it is not necessary to sow the seed before the month of May, and then in the open ground, well manured with stable dung thoroughly cured, and not less than a year old. The colour, whether white or red, is a matter of taste. I generally mix my seed, and thus have both species. The seed is slow of vegetation, but, if good, never fails to germinate. Whether the seed be sown broadcast or in drills, is a matter of no consequence; as the seed being very small, the plants are sure to shoot up thick. So soon as the sprouts have attained the height of an inch, they should be pricked out in a bed of rich mould, at the distance of about three inches each way from each other. You cannot have good strong stocky plants without pursuing this method. If left standing in the seedling-bed, they will grow spindling, weak, and consumptive. No more attention is required, excepting that of keeping the plants perfectly free from weeds until August, when you will find the plants strong, healthy and vigorous.

Any time in this month dig your trenches eighteen inches deep and as many wide. For this purpose I generally occupy the ground that has been used for early peas.

The quality of the celery, and chiefly its growth, depends entirely upon the next step. The trenches should be half filled with thoroughly cured stable manure. I have found the manure used for early hot-beds the best. It never fails of success. The increased fermentation of the manure, by the repeated waterings of the beds, the escape of the ammonia and noxious qualities of the manure render it sweet and capable of imparting the mildest and richest flavour to the plant. If fresh manure from the yard, of whatever kind, is used, the celery will invariably grow strong and rank, with as little delicacy of flavour as there is in the manure. With a garden fork of four tines, strike through the manure in the trench into the earth beneath and bring it up fresh, carefully mixing it with the manure as you proceed from one end of the trench to the other. Attention to this point is indispensable to the growth of good celery.

The plants taken up should be trimmed about the crown, just at the top of the root; all the young suckers taken off, leaving the plant trim and neat, with all its main stalks. With a dibble, which should be as large as the handle of a spade, as the roots will now be of considerable size, begin at one end of the trench with your face towards the other, and set in a single row of plants in the middle of the trench, and not less than six inches asunder; water them well. No tee-totaler loves water better than does celery. It cannot have too much. The roots of this plant require more room than is generally allowed them, as any one may see when they are taken up for the table.

Earthing up the plants should be delayed until they have attained a good size; and then it requires care, especially the first time. I always get into the trench myself, and, holding the plant with all its stalks firmly in my left hand, with a short-handled small hoe draw the earth up round the plant, without allowing it to come in between the stalks. When this is done, and the plants thus protected, you may, with a spade, strike off the edges of the trench, and partially fill it. As the plant grows—as it now will, if well watered in dry weather, with great vigor—continue to earth up, and by the 1st of November the plants will be two feet above the level of the earth, with a main stalk the size of a man's arm.

Sometimes, particularly if the season be dry, celery is liable to be attacked by a fly. In that case you will see the tops of the celery turn brown and wither. The moment that symptom appears, no time is to be lost in calling in the doctor; for the whole crop is at stake. The cause of the disease is the sting of a fly upon the leaves of the celery. The egg is deposited between the integuments of the leaf, and soon hatches into a small white worm—sometimes visible on opening the leaf to the naked eye, always by the aid of a microscope. If not attended to, the disease gradually descends to the root, and the whole plant falls a sacrifice. Amputate every defective and diseased leaf; and early in the morning, whilst the dew is on, sift on to the whole of the plants fresh slacked lime. One such powdering is generally sufficient; but if not, give them another dose, and the first rain that falls will wash the plants clean, and you will probably see them fresh, green, and stretching away towards maturity.

With regard to the mode of securing the crop for winter use, gentlemen have their fancies. I prefer leaving the plants in their original trenches, earthing up to the top of the plants, and covering with straw litter and boards, so as to protect them sufficiently from the frost, to be able to take them up as wanted; and this always fresh and sweet. I do not fancy disturbing the roots, and transplanting into narrow quarters.

Finally, any one in this country who wishes to have "first-rate" celery must cultivate it himself. Common labourers are sure to spoil it. Professional gardeners are

seldom found, and generally too expensive when they are.

Your obedient servant,

JUNIUS SMITH.

Hon. H. L. ELLSWORTH.

IMPORTANT TO PORK RAISERS.—There is an increasing demand in the eastern markets for pork and bacon from young hogs, and of thinner quality than formerly; and farmers are beginning to learn that by selecting a good thrifty breed, and managing them properly, they can raise hogs of 200 to 250 lbs. weight at nine or ten months old, and at a saving of one-third to one-half the expense over the old system of wintering store hogs, and slaughtering them at 18 or 20 months old. To practice this system the pigs should come in winter or early in spring; and special care must be taken to have them *kept thriving during their whole lives;* for if they become stunted when young, it is impossible to recover them in time for slaughtering till the next year.—*Ohio Cultivator.*

MANURE.—It is really surprising to see what a large quantity may be collected and made from a very small number of cattle. If a barn yard were cleared once a week and transferred to the compost heap, which should be made a save-all of every thing that ever had vegetable or animal life, a large heap is soon made with mud, sod from the sides of the roads, and the deposit of ditches, which may be thrown over, and moved after rains before the land is put to work. The great process of nature is to reproduce, and we may have this reproduction in grain, fruit or vegetables. All we have to do is to prepare the earth, sow or plant, and cultivate, and a bountiful Providence does the rest.—*Farmer's Monthly Visitor.*

GYPSUM FOR STABLES.—The London Agricultural Gazette says: "In our concern, where we have a great number of horses, we use gypsum in our stables, strewing it on the floor, which arrests the ammonia as it is formed, and thereby not only helps to preserve a most valuable fertilizer, but also renders the stable much more wholesome for the horses. If, in the hot stables that are sometimes met with at inns, where the air is so charged with ammoniacal vapors, that when you enter your eyes are affected, a little gypsum were strewed on the floor every day, all that offensive smell would be done away, and the stable be much more healthy for its inhabitants."

Large Chests.

Horses that are round, or "barrel-chested," are invariably more muscular and enduring than those of the opposite kind. Scientific sportsmen are, in a great measure, guided in their opinion of a horse's racing qualifications by his girth just behind his shoulders; by this test, a well-known jockey foretold the reputation and prowess of the celebrated racer "Plenipotentiary," almost from the period of his birth. Cattle-dealers and butchers, in like manner, judge by the chests and shoulders of cows and pigs what amount of fat they are likely to gain in the process of feeding. All animals that have large lungs are remarkable for the vigour of their appetite, and for the facility with which they appropriate their nutriment; such animals will feed upon the coarsest hay and straw, whilst their less fortunately constructed companions are fattened by no kind of food. An amusing anecdote is related of a simpleton, who, in trying to sell his horse, declared that "*the animal's eating was a mere nothing.*" The intelligence would, contrary to intention, have sufficed to ruin the prospect of sale, but that the buyer, with a rare discrimination, inferred from the horse's chest that the capacity of his appetite had been unwittingly misstated. He bought him on the hazard of an opinion, and had no reason to repent of his judgment.—*Medical Times.*

SUBSOIL PLOUGHS.—In many soils, not otherwise rich enough for corn, it would be a good practice to make a furrow six inches deep in the fall, with a common plough; then let a subsoil plough run in this furrow ten or twelve inches more; and it would be still better to put cornstalks and other manure in this trench, and listed in when thoroughly wet, with a small plough or hoe; the land to remain in this state till planting time. The subsoil plough is very valuable; by its use the soil will be less wet in great rains, and more moist in great drought. Where the subsoil is used, in comparison with only the common plough, the yield will be fifty per cent. more, and the crop in dry weather always green. The subsoil plough has doubled and frequently trebled the crops.—*Farmer and Gardener.*

TO DESTROY INSECTS ON PLANTS.—Tie up some flowers of sulphur in a piece of muslin or fine linen, and with this the leaves of young shoots of plants should be dusted; or it may be thrown on them by means of a common swansdown puff, or even by a dredging-box.—*Peterson's Magazine.*

To Improve the Soil.

To improve a soil is as much as to say that we seek to modify its constitution, its physical properties, in order to bring them into harmony with the climate and the nature of the crops that are grown. In a district where the soil is too clayey our endeavour ought to be, to make it acquire to a certain extent the qualities of light soils. Theory indicates the means to be followed to effect such a change; it suffices to introduce sand into soils that are too stiff, and to mix clay with those that are too sandy. But these recommendations of science which, indeed, the common sense of mankind had already pointed out, are seldom realized in practice, and only appear feasible to those who are entirely unacquainted with rural economy. The digging up and transport of the various kinds of soil according to the necessities of the case, are very costly operations, and I can quote a particular instance in illustration of the fact: my land at Bechelbronn is generally strong; experiments made in the garden on a small scale showed that an addition of sand improved it considerably. In the middle of the farm there is a manufactory which accumulates such a quantity of sand that it becomes troublesome; nevertheless, I am satisfied that the improvement by means of sand would be too costly, and that all things taken into account, it would be better policy to buy new lands with the capital which would be required to improve those I already possess in the manner which has been indicated. I should have no difficulty in citing numerous instances where improvements by mingling different kinds of soil were ruinous in the end to those who undertook them.

A piece of sandy soil, for example, purchased at a very low price, after having been suitably improved by means of clay, cost its proprietor much more than the price of the best land in the country. Great caution is therefore necessary in undertaking any improvement of the soil in this direction,—in changing suddenly the nature of the soil. Improvement ought to take place gradually and by good husbandry, the necessary tendency of which is to improve the soil. Upon stiff clayey lands we put dressings and manures which tend to divide it, to lessen its cohesion, such as ashes, turf, long manure, &c. But the husbandman has not always suitable materials at his command, and in this case, which is perhaps the usual one, he must endeavour by selecting his crops judiciously, crops which shall agree best with stiff soils, and at the same time meet the demands of his market, to make the most of his land. In a word, the true husbandman ought to know the qualities and defects of the land which he cultivates, and to be guided in his operations by these; and in fact it is only with such knowledge that he can know the rent he can afford to pay, and estimate the amount of capital which he can reasonably employ in carrying on the operations of his farm.

In an argillaceous or clayey soil, it would be absurd to persist in attempting to grow crops that require an open soil. Clayey lands generally answer well for meadows, and autumn ploughing is always highly advantageous to them by reason of the disintegrating effects of the ensuing winter frosts. —*Boussingault.*

Cranberries.

In answer to the inquiries of a subscriber on this subject, we will remark as we have often before, that the cultivation of this plant is not yet reduced to any regular system. They come into some lands and disappear in others unexpectedly and unaccountably, unless it be owing to a rotation of crops by nature, as oaks succeed pines, and the reverse.

If the land be not naturally wet, it is best to prepare for flowing, and there is sometimes an advantage in flowing very wet lands. The water is a protection against severe cold in winter, and by flowing late in spring the blossoming may be retarded until the frosty season has passed, and if flowing can be effected rapidly, it may be done any time in summer when there are indications of a frost.

As to the preparation of the soil, if it be naturally too dry, mud will improve its texture by rendering it more retentive of moisture, and if the land be naturally wet and the soil composed mostly of mud or peat, sand will be a good manure. When land has been long in grass, and cranberries have not grown, the cranberry plants would be likely to displace the grasses, aided by the tendency of nature to rotation, but if the ground has been in cranberry vines, and they have disappeared, the land should be ploughed, or in some way inverted, burying the grass completely, and tolerably deep.

In transplanting, as we lately observed, take up shovelfuls of the soil at places about four feet apart, and place in the holes shovelfuls of earth taken from a cranberry bog with the vines therein, and they will soon run and occupy the whole ground. For further information we refer our readers to a discussion on this subject at the State House, which appears in the Cultivator of March 8th.—*Boston Cultivator.*

Pepper and Mustard.

Human life, though a great and momentous affair, is the sum and result of many little and apparently insignificant arrangements. Who, without experience, would think that pepper and mustard could materially influence our enjoyments—could affect, even in a moral point of view, either the head or the heart? Yet so it is—'these little things are great to little men.' Suppose that we are set down to dinner, and that we have been helped to some hot and savoury soup; we take up the pepper box, but find it either empty, or half filled with large particles which will not pass through; or if it contains a supply of good pepper, the holes are so stuffed up that not a particle can make its escape; or, what is still worse than all, the lid has been so carelessly put on, that the moment we begin to use it, off it tumbles, and the whole contents of the cruet fall into your plate at once. Or, on the other hand, suppose we have been presented with a plate of beef; the mustard pot is empty, or it is partially filled with the rancid remains of a former day, dirtily clogged around the sides and top of it; or it may be filled with a tasteless fluid, the result of a dish of water put into the half empty vessel before dinner. It may not even be found on the table at all; and, after several times calling for it, and during the time lost going for it or searching it out, you are obliged silently to eat your beef without the aid of its stimulating flavour. If, on the contrary, you are resolved to wait its appearance, your patience and temper undergo a severe trial, and your keen appetite is lost in the anxiety of hope deferred, while the tedious process is going through of procuring a fresh supply. First of all the keys have to be found; or, it may be, the key which opens the work-basket which contains the key which opens the closet which contains the shelf where, huddled among a dozen heterogeneous packages, the paper containing the mustard powder is to be found. Then this powder, which has lost more than half its pungency by being kept in paper instead of a stone jar, has to be hurriedly mixed up with water, and is brought at last, after a world of delay, with large knots of dry powder interspersed among the half liquid mass. If, under the same auspices, you should dine day after day at the same table, it is ten to one but the same neglects are repeated. If you should ask for pickles to your beefsteak, they will also have to be waited for in the same manner; or, if on the table, they will in all probability contain a metallic spoon, the action of the acid on which producing a poisonous mixture, will effectually deter you from partaking of them. In short, these little arrangements are an index of the mind of the presiding mistress. It may sometimes be the fault of the servants; but the omissions of servants, unless they are incorrigible, more frequently depend on the guiding spirit of the house than on their own peculiar faults. When one sees the arrangements of the table perfect, even including the well filled, clean, and inviting mustard pot, he may be assured that all other most important departments of domestic management are in their proper order. "My dear," says Mrs. Slovenloof, "why should you vex and fret yourself so about such a trifle as the omission of the mustard? How often do you tell *me* not to fret myself about trifles? Besides, I do not think either pepper or mustard agrees with you; and I have been reading lately that too much of such things is unwholesome." "Yes, too much of any thing is unwholesome; but what do you say to too little, or none at all?" "I have read, my dear," retorts Mrs. Slovenloof, "that man in a state of nature requires none of these things; that half broiled beef or venison, of which you so often complain, is devoured by the savage without salt, or pepper, or any thing else, and reckoned a most savoury meal; and I do think, that all the niceties of cookery are very useless, and I am sure they are very, very troublesome?" "The savage," replies her husband, "takes his food thus because his squaw knows no better; and depend upon it, did she present him with a well cooked and well seasoned mess, he would eat it with a double relish, and thrive under it too, in a way quite different from what he does under his ill-cooked fare. But even your instance of the savage is an unfortunate one. Your 'man of nature' is just as fond of aromatics and other stimulants as a civilized man. Witness his avidity for salt, for aromatic and bitter roots and herbs, for the intoxicating cava, for beer, for tobacco. Nay, if we stoop to the analogy of the lower animals—whose appetites you will allow are under the guidance of unerring instinct—we shall find that they, too, are equally incited by appetite to take along with their food stimulants, such as salt and aromatic herbs and roots." Mrs. Slovenloof, however, was unwilling to be convinced. There are none more fertile in evasive excuses than the really indolent and negligent; and she spun out the argument for about two hours after dinner, advancing however, nothing but commonplaces in support of her theory, till at last she unconsciously gave it a practical deathblow, by partaking freely of both tea and coffee in

the evening; both of which, according to her view of the question, were equally unnecessary as pepper and mustard.—*Chambers.*

Waste Manures.

Norwich, Conn., June 29, 1844.

Sir: I have been much interested in the examination of your able and very valuable report for 1843, the first that has fallen into my hands. By its perusal, I am the more convinced of the importance of close observation, investigation, and comparison of facts, in all the occupations of life. I see you have given much attention to manures; and, although my business is bleaching and finishing cotton goods, and more immediately connected with manufacturing, yet I have always felt a deep interest in agriculture and horticulture; and, like thousands of others engaged in other pursuits, am looking forward to the time to retire from other business, and engage it. Hoping that my present business may render some service to the tiller of the soil, I call your attention to the following facts.

In bleaching cotton goods, we boil them in lime—about one cask to three tons of goods; this we do to extract or kill the vegetable and other oils got into them in the process of manufacturing. They are again boiled in one hundred and fifty to one hundred and eighty pounds crude soda (or soda ash, as it is called in market) to the three tons of goods, for ten or twelve hours; then the spent lye is drawn off as before. Now the most, if not all bleachers, make little or no use of this spent lye. Supposing that a liquid so highly charged with alkali, vegetable, and other matter from the cotton goods, would be worth something for manure, I have a pit dug of about eight hundred square feet, and three to four feet deep; filled it about half full of soil, into which I have run all the spent lye from both ash and lime boil, until it has become fully impregnated; so that, in digging it over, it smells very much like hog-manure.

I have had no time or opportunity to try its effect on different kinds of soil; neither have I found any person engaged in agriculture, who was willing to make a fair trial of it. The only trial I have ever seen, of any kind, was on a small lot, three-quarters of an acre, elevated, gravelly land, and somewhat arid soil. The lot was divided between three tenants, for a garden, equally. The first manured his portion with barn-yard manure; the second, who had the middle garden, used the soil impregnated with spent lye; the third used little or no manure of any kind. The season was very dry; the gardens of the first and third suffered severely—so much so, as hardly to pay for cultivating. A cornfield, on the same kind of soil, near by, was very much injured; while the garden manured with the impregnated soil did not suffer any. Vegetation did not progress as rapidly as on the other lot, yet the growth was healthy. Sweet corn, which mostly covered the second lot, was of a deep green; the leaf did not roll, and showed no sign of being affected by the drought; it furnished a fair return of green sweet corn, until cut off by the frost in October.

What would be the effect on different soils, or in different modes of applying it, I have no means of judging; but should take pleasure in furnishing any person who would make a fair trial of it, without charge. If it has value as a manure, it is important to be known, as a large quantity can be furnished in New England at small expense. I have made an estimate, from my knowledge of the bleaching business in New England, and am confident that I am safe in saying that there is more than six thousand five hundred casks of lime used yearly in bleaching cotton goods alone, and a much larger quantity is used by the paper-makers in bleaching rags; that the bleachers of cotton goods in New England use more than one million two hundred and fifty thousand pounds of crude soda, or soda ash, yearly; the spent lye of which I think almost all is wasted.

One word about soda ash. It has very generally taken the place of potashes. I think it was introduced among bleachers in this country in 1835, by James Lee, Esq., of New York; since which time it has also been largely introduced into use among glass-makers and soap-makers. As it is an imported article, I should think it worth the effort to learn the mode and cost of production.

Please excuse me for drawing so largely on your time and attention; and believe me, yours, very truly,

Moses Pierce.

Hon. H. L. Ellsworth.

Grafting the Chestnut on the Oak.—In the department of the Correze, an oak, engrafted eight years ago with the chestnut, has produced at length, chestnuts of good quality. The success of the experiment is deemed important for extensive districts where the oak flourishes, and the chestnut is barren, and where the fruit is needed for food.

Milking Cows.

The owners of cows should pay particular attention to milking. Children should not be trusted with this business, and there are many grown people who never milk well, though they have been brought up to the business.

If you would obtain all the milk from the cow, you must treat her with the utmost gentleness; she must not stand trembling under your blows nor under your threats. She may at times need a little chastisement, but at such times you need not expect all her milk.

Soon after the bag has been brushed by your hand, and the ends of the teats have been moistened a little with milk, it flows in rapidly, and all the veins or ducts near the teats are completely filled. Then it must be drawn out immediately or you will not get the whole. You must not sit and talk—you must not delay one moment, if you would have all the cow is then ready to yield.

The udder should be moved in every direction at the close of milking, and the hands may beat it a little, in imitation of the beating which the calf gives it when he is sucking. An expert milker will make the cow give one quarter more in butter than a majority of grown milkers will.

One season, at Framingham, says an experienced writer, we kept four cows in the home lot; there was but little difference in the quantity of milk given by each. We had a *very steady* hired man of forty years of age; he had carried on a farm in New Hampshire, and had always been used to milking; but he was so slow the cows had no patience with him.

We milked two of the cows, and he the other two, and we were but little more than half as long as he in milking, though we got the largest mess by about one quart. On our remonstrating, that he did not draw out all the milk, he said his cows would not yield so much as those milked by us. We then made an exchange; he milked our two, and we milked his. In three weeks time the case was reversed; our mess exceeded his by nearly one quart. He never failed to strip his cows to the last drop; but his *intolerable moderation* prevented his obtaining what an active milker would have done.

Young learners may practice on cows that are soon to be dried off. They should be taught *at first* how to take hold of the teats, and they will remember it; but how common it is to let each child choose his own mode of milking! Learners should know that the hand should be kept very near the extremity of the teat, if they would milk with ease. The left arm should always press gently against the leg of the cow; for if she is inclined to kick, she cannot, with any force; she cannot *strike* an object that leans against her; but if she raises up her foot, as she often will when her teats are sore, the milker will be ready to ward off and keep it from the pail, much better than when he sits far off from the cow.

If heifers are made tame and gentle by frequent handling when they are young, they are not apt to kick the milker; their udders should be rubbed gently before calving; it is quite as grateful to them as carding. But if they are suffered to run wild till after they have calved, they cannot be expected to be gentle when you first attempt to milk them: they often acquire bad habits, and are not broken of them through life.—*Emigrant's Hand-Book.*

Profits of Poultry—Keeping Eggs.

Philip Smith, Jr., makes a statement in a late number of the Cultivator, showing that from a stock of 35 hens and a rooster, he had a nett gain in the year 1844, of $5 40, after paying $18 67 for grain, for feeding, and the enormous rent of $15 for yard, &c. They gave him 3115 eggs, and an increase of 53 hens. He says: "My manner of keeping eggs so that they will be fresh, is as follows. I place a layer of saw-dust in a keg, then pack the eggs closely to each other, with the *small end down*, to prevent the yolk from passing through the white of the egg; over this place another layer of saw-dust, closely packing to, and between the eggs, where they do not touch each other, and so on to filling the keg; then head it tight, and change it end for end every twenty-four hours. In this manner eggs will keep a year, and be as fresh as the day they were laid."

Grafting Currants.—The Gardener's Chronicle recommends for the pretty appearance presented, as well as for improved flavour, to graft currants of different colours, as the red, black and white, variously intermixed, on stocks trimmed up to a single stem three or four feet high. The tops may be headed down to a compact head, or trained as espaliers in the horizontal or fan method, the two latter modes of training, by the free exposure to sun and air, much improving the quality of the fruit. The importance of trimming the bushes up to single stems to improve the fruit and facilitate clean culture, instead of suffering two hundred and fifty suckers to shoot up all round into a dense brush heap, is very obvious to those who have tried both.

Importance of Manure.

The progress of agricultural improvement brings with it an increased demand for manures of easy transport. The supply gradually falls short of the demand, and their market value rises until they reach a kind of famine price; at which the corn they can be made to raise, barely repays the cost of applying them. This high price, which at first appears to be an unmitigated evil, leads, however, to good in many ways. Perhaps the simplest and most intelligible way of treating our present subject will be, to follow in their order the successive effects or improvements to which this high price naturally gives rise.

In the first place, it causes all *known* manures to be eagerly sought for and collected. The home dealer is stimulated to search for them in every quarter, and each bone-mill employs its staff of humble collectors to perambulate the towns and villages. Foreign and larger dealers spring up in the seaports. Our east coast puts the whole sea-board of Europe under requisition—whole fleets of merchantmen from the west, skirt the Irish shores, or, crossing the Atlantic, bring their cargoes of bones from the United States; and even to Buenos Ayres and Monte Video, suggest a new article of export, in addition to the hides and tallow of their numberless cattle. Such is, perhaps, the earliest national advantage which springs from high prices and increased demand.

It is interesting enough to mark how agriculture and commerce thus mutually aid each other—how the wants of one country impart a new value even to the refuse substances of another, and afford a new employment to its idle population. But it is more interesting still to observe how such a traffic, commenced with a view to the benefit of our own farming interest, reacts upon the minds of the agricultural population in those distant countries—awakening them to new desires, and leading them to increased skill in the art by which they live. Bones, for example, they come to think, may be useful at home, if it is worth the while of English merchants to bring them from so great a distance. How are they to be used, they ask, where and when applied, to what crops, on what soils, and after what preparation? Such questions called forth by degrees a vast amount of practical information, the diffusion of which has in Sweden already given rise to the complaint, that bones are not to be obtained by the home farmer, because of the high price offered by the exporters to England; and in the United States of America, to the reflection, that they are surely worth more for home consumption than the seven or eight dollars a ton which the English agents pay for them. How striking to see the awakening intelligence of a few thousand agriculturists in our own island, thus rousing a spirit of inquiry, and actually pushing forward the art of culture in the most remote parts of the world!

A second and no less important consequence of this high price of manure, is the saving to which it leads of such as were previously wasted. It is only the more skilful farmers who use these comparatively costly substances, in any considerable quantity. The less skilful cannot afford to use them. Their land is not in proper condition, perhaps because it is undrained, or they apply them after a wrong method, or at a wrong season; so that if by way of experiment they are tempted to try them, they suffer an actual money loss, and they are long deterred from employing them again. Nevertheless, the absolute value of manures of every kind rises in the estimation of the farmer, as that of portable manures increases. He comes to see that every waste of manure is an actual loss of money; and when satisfied of this, the slowest begin to move, and the most wedded to old customs to think of deviating from the methods of their forefathers.

The instructed look with amazement when, on the borders of the Roman Campagna, they see whole hills of dung, the long accumulating refuse from the stables of the post-house, or when, on the breaking up of the winter's frost, they see the yearly collections from the farm-yards floated away on the ice of the Wolga, almost literally realizing the times of the Augean stables. We never dream that anything half so barbarous could by possibility happen among ourselves; and yet a visit to a hill-farm in Northumberland, may show us the same winter accumulations emptied purposely on the side of a brook, that the waters may carry them off, or into some neighbouring hollow, where they are least in the way, and have been permitted to collect for entire generations. Such palpable waste is seldom seen, indeed, in the lower country, where intercourse is greater, and where knowledge and public opinion spread more widely, and exercise a more immediate influence; and yet the no less serious waste of the liquid from our farm-yards is still too widely prevalent, even in our better cultivated districts, and among our more improving and intelligent farmers. Within the last few weeks, we have walked over the farms of the first practical farmer of the Tyne-side, and of the most celebrated

breeder in Yorkshire, and yet, from the fold-yard of the one, the liquid was conducted by a drain into the nearest ditch; and from the cow-houses of the other, into a shallow open pond, where it stood reeking and fermenting beneath a blazing sun! What merit, as a farmer, can that man claim, who, though he annually lays five tons of guano, or bones, or rape-dust upon his farm, yet allows what is equal to ten or twenty tons of the same, to run to waste from his farm-yard in the form of liquid manure?

It is such waste as this that the high price of portable manure tends to check. It is now happily checking it here and there in various parts of the island; but it will be long before the evil is remedied over the general face of the country.

But after he has done everything in the way of saving what he had hitherto inadvertently neglected, the inquiring farmer still finds that his wants are not all supplied; that if he would farm high—raise, in other words, the largest possible produce from his land—he must still incur a considerable annual expense in the purchase of foreign manures. Can I not, he next asks himself—can I not husband these manures which cost me so much? Is there no way in which I can more economically apply them, so as, from the same quantity of manure, to obtain a larger return of roots or corn? This inquiry leads him to three successive mechanical improvements, as they may be called, which are severally applicable to one or other of the crops he cultivates. *First*, To put his manure into the ground immediately before he sows his crop in spring or summer, rather than in the preceding autumn. This is a result of the same system of saving to which we have already adverted. By examining the waters which escape from the drains during winter—upon his thorough drained land—he finds that they actually carry with them a portion of the manure he had previously laid upon his fields in the autumn, and that thus he had unconsciously suffered a partial loss. To put it in, therefore, only when spring arrives, will ensure him a certain saving. *Second*, To deposit the manure in the drills when his seed is sown, putting it all thus within reach of the plant, and wasting none of it on the unprofitable or unproductive part of the soil. And *third*, with the drop-drill to bury it only beside the seeds it is intended to nourish, and thus more perfectly to effect what laying along the whole drill had only in part accomplished. These methods husband his manures, and, at the same time, call in the aid of the ingenious mechanic to furnish cheap and efficient implements, by which the several operations may be easily performed. They may not be applicable to all his crops, and there are certain circumstances under which the intelligent practical man will wisely refrain from fully adopting any one of them; but they are valuable illustrations of rural *economy*, nevertheless, and of the line along which improvement will proceed, in endeavouring "to raise the largest amount of produce, in the shortest time, at the smallest cost, and with the least permanent injury to the land."

But the same desire to husband his manures, leads him also to what may be called a chemical improvement in the form in which he applies them. "If," says he, "as chemists tell me, the roots of the plant drink in only that which is in a liquid form, the manures which are already in a liquid state, or in such a condition, at least, that the rains will readily dissolve them, should be more immediately useful in the nourishment of my crops. If I apply dry bones to my turnips, they must take a considerable time to become soluble, and may not yield all their substance to the growing bulb before its period of maturity arrives; and though the residue of the bones left in the soil does benefit the after crop, still the rains of winter must wash away some of their constituents, and thus occasion to me a variable loss. Would not the same quantity of bones or rape-dust, or even of guano, go further in the production of corn, or potatoes, or turnips, if I could apply all their constituents to my land in a fluid form?" Theory and experiment both answer these questions in the affirmative. Recent experiments, especially upon the action of bones dissolved in sulphuric acid, have thrown new light upon this subject; and though too hasty inferences have by some been drawn from them, and the benefits to be derived from the new method have been exaggerated, and unreasonable expectations have consequently been excited, yet such good may fairly be expected from the use of the liquid form of applying manures, as will encourage, we hope, the continuance and extension of experimental inquiry.—*Edinburgh Review.*

Poultry Houses.—If you wish your hens to lay through the winter, have their houses cleaned out thoroughly. Empty the nests of all filth, and have them scraped inside and out, and then whitewashed. Place contiguous to your hen-house, under roof, a peck or two of lime, a bushel of gravel, and a load of sand or ashes, so that they can daily have access to these substances.

Culture of the Olive, Grape, &c.

The section of level land lying between Nismes and Montpelier, is cultivated chiefly with olives, and the Frontignac and several other fine varieties of grapes. The olives had just been gathered and pressed. This tree does not bear until it is ten years of age, but it is very long lived. I saw some at this place which are known to have existed in the time of Cæsar. Surrounded by an abundance of food as we are in America, it is difficult for us to estimate the very great importance of the olive to the poorer classes in France. Requiring no cultivation, and no further labour than to gather the fruit and express the oil, it can be afforded at a cheap rate. This oil with coarse bread, constitutes almost the entire food of the lower classes of France and Italy. They have also some cheap kinds of light wine, at a few sous per bottle, which is much used.

The cultivation of the grape in Europe is a subject in which I feel much interested, and on which I have already obtained some information. After being accustomed tc the extensive glass vineries of Boston, Philadelphia, and Flushing, I was forcibly impressed with the great simplicity of its culture, both in France and Italy. In some instances planted in sandy or gravelly soil, in which scarcely anything else would grow, without stake or trellis to support them, and consisting of two branches, each pruned down to three buds, they are made to produce some of the finest fruit in the country. In other instances they are tied to stakes and trellises, and moderately manured. It is very desirable to obtain some varieties of these delicious European grapes, that will succeed well with us in the open air. That such can be obtained, I have no doubt; for they are found flourishing upon some of the most exposed points of the Alps, and where there is a foot or more of snow during the winter. An American gentleman of distinguished literary merit, and some time a resident of Italy, has been making a collection of these vines, and through his kindness I hope to send some of them to Flushing this spring, in time for planting out. By another year we shall, in this case, be able to test them fully, and to aid, perhaps, in introducing to the lovers of good fruit in America, some new and very superior hardy varieties of the grape. I much regret that my visit here is not during the vintage; at that season I should have full opportunity of seeing the different varieties, and testing their respective merits.

They have good cattle here, but none that will compare with the English. Buffaloes are used in the campagna, and the oxen are often handsome, with horns sometimes three feet in length. The cows are small, and much like our native cows in form. It is amusing to see the peasants milking them from between the legs *behind!* where a single kick will send milker and milk both topsy-turvy! Besides these, they use the milk of goats and asses. There is a milk establishment opposite my window, and the donkeys *bray* lustily every morning, by way of reveille. Their milk is said to be particularly rich. The old Roman breed of horses is still kept up, and I have seen uniformly better horses here than in any other city. They are not large; are of a glossy black, well formed, with thick mane, and a tail sweeping the ground. Agriculture in Italy is a century behind the age. For a plough they use a narrow triangular piece of plank, with a stake put on one end for a handle, and the oxen draw it over, rather than through the soil, by their horns.

S. B. Parsons.

Rome, Feb. 14th, 1845.

A Humble Reading Room.

The following lately appeared in the *Glasgow Citizen* newspaper:—"How little do people know of what is passing daily around them! Until the other evening, we had not the remotest idea that, on being conducted up the first stair of a dingy low-roofed close in Saltmarket, No. 115, we should observe, painted in white letters on a door, the words 'Reading Room.' Was it possible that in such a locality—in the midst of vice and wretchedness—surrounded, as it were, by the very dregs of our dense population, there existed an institution devoted to mental culture and self-improvement? By what strange accident had a ray of light from the upper levels of society descended to this obscure alley? On entering, we passed a small kitchen to the right, with a fire burning briskly, and a shelf along the wall, supporting some half-dozen coffee-cups, with three or four bottles of lemonade. Before us were two rooms with tables and forms, and sufficiently lighted with gas, although, on the whole, rather scantily furnished. In one of these apartments were a few workmen—for aught we know, common labourers—with hard bushy heads, greedily devouring the news; while in the other, there was some one reading aloud to two or three gaping listeners, whose education had been more neglected. On inquiry, we learned that the subscription to the rooms, which were pretty well furnished with newspapers and cheap

periodicals—such as *Chambers' Journal* and *Miscellany*—was only *one shilling a quarter;* and that among the subscribers there were no fewer *than eleven who could not read!* It was the first time we had heard of men ignorant of the alphabet subscribing to a news-room! This interesting establishment, which was started upwards of eight months ago, through the praiseworthy exertions of a person named Mr. James Partridge, is denominated 'The City Teetotal Reading Room,' and affords a curious instance of the good that is sometimes doing by private individuals in obscure places, and under circumstances apparently the most adverse.—*Littell's Living Age.*

The Improved Nautilus or Safety Girdle.

This is an important article to travellers. The opinion of those who have tested its qualities, together with an examination of its construction and mode of operation, induces a belief that, in practice, it will fully sustain all that is claimed for it. The Nautilus is a foreign invention, and has obtained a high reputation in Europe, having been adopted in the English and French marines, by order of their respective governments. In the hands of our ingenious countrymen its mode of construction has been materially changed and improved. It is secured by Letters Patent, both for the original invention and the improvements. It is inflated by the single act of putting it around the chest, and when secured there, the wearer cannot immerse his head in the water, consequently drowning is impossible. Its superiority over the ordinary air bag, consists, first, in its being inflated in a moment of time without the aid of the breath. Secondly, when inflated, the water proof covering is distended by an ingenious apparatus within, and permanently remains so whilst around the chest, or otherwise elongated. Being thus distended, and unable to collapse from external pressure, the air within has no tendency to escape, consequently, if perforated with numerous small holes, it retains its buoyancy for a long time.

Thirdly, the compact form to which it may be reduced when not in use.

In view of the immense destruction of human life on our inland seas, rivers and Atlantic coast, it ranks as an indispensable article for the carpet-bag, or overcoat pocket of the traveller.

In all kinds of boat service, in stress of weather, landing through surf upon the beach, &c., the Nautilus cannot fail to be essentially serviceable. Two dozen of them extended around a long boat or launch, converts them into perfect life boats, which can neither capsize nor sink. This can be accomplished with but little preparatory arrangement for making them secure. The recent loss of the ship Alabamian, and the rescue of the passengers and crew by almost a miracle, would have illustrated the use of the Nautilus, in converting a launch into a life boat.

The revenue service, in our harbours, and along our coast, should undoubtedly be supplied with them. The Nautilus may be examined at Leary & Co's, No. 5, Astor House, S. C. Smith & Sons, 79 John street, or at the Factory, 83 Anthony street.—*New York Farmer and Mechanic.*

Hatching of double yolked Eggs.

The statements below are given as we find them in the *North American*. We would not be understood as vouching for their correctness.—Ed.

Her Majesty's Aviary at Windsor: The following singular and rare, if not unique occurrence, has just taken place at the Royal Aviary, in the Home Park, at Windsor. It having been deemed advisable by Mr. Walters, the superintendent of her Majesty's Aviary, in order to improve the breed of the genuine Dorking fowl, that it should be crossed with that of the Cochin China fowl, the necessary arrangements were made for that purpose. A Dorking hen, which had roosted for some time past with the fowls from China, has recently been in the habit of laying twice, and sometimes thrice a week, eggs containing double or two distinct yolks. Mr. Walters determined to try the experiment of attempting to hatch one of these double-yolked eggs, and placed it with several other eggs under the hen. The result was that two chickens were produced from this single egg; one is a cock-bird, of the pure Cochin China breed, and the other is a hen chick, of the Dorking genus. Both which are now five days old, are in good health, and there is not the least doubt of their being reared. This is a circumstance, as we are informed, unprecedented in the annals of natural history. The Cochin China fowls were imported into this country direct from Asia, and presented to her Majesty last autumn.—*North American.*

A man who gives his children the habit of industry, provides better for them than by giving them a large sum of money.

A man is valued, as he makes himself valuable.

From the Cincinnati Gazette.

Male and Female Strawberries.

Messrs. Editors,—The season for the blossoming of the strawberry is at hand, and it behoves all who wish to raise this fine fruit, to examine their beds, and ascertain if they have both male and female plants, and the proper proportion of each. There should be one male to ten or twelve of the female. The blossom of the male is larger and more showy than the blossom of the female. I have been at a loss to describe the two blossoms to persons ignorant of botany—who would not understand the terms staminate and pistilate—and enable them to distinguish the difference. I was trying to do this recently, when a Dutch boy was present, the son of one of my tenants, who described the difference so as to make it apparent to all. "Why," said he, "you not know the man from the woman? The man he have the beard, the woman have none." In the female plant, the pistils, or female organs only, are perceptible, and is the little yellow centre, at the end of the stem, in the centre of the flower. By pulling the flower apart, the stamens, or male organs, will be found attached to the hull, but very short and defective. In the male plant, the stamens one-third of an inch long, and like the beard, cover completely what may be called the face of the blossom, with yellow heads, which contain the principle of impregnation. As soon as the white leaf of the blossom falls, every female blossom will show the fruit, whilst in the male blossom, there will generally be no fruit; and where there is any, most of them small and ill-shaped. The reason is, each blossom may be said not to be one, but near one hundred. Each one of the hundred must be impregnated to produce a perfect fruit. The female organs being covered by the stamens—beard—are generally defective, and a portion only, if any, are impregnated; and I have never seen a blossom produce a perfect fruit. The portion impregnated swells out, the other shrivels, and the berry contracts in that part. The white and monthly varieties are an exception. In these both organs are perfect, and, as a consequence, the fruit small. In raising from seed generally, an equal portion of male and female are produced, and their runners never change their character. But the male soon roots out the female, as it increases faster, being the stronger plant, and none of its energies exhausted in perfecting fruit. When the people of the East are not too wise to examine and understand this subject, they too will have gardeners who will supply the market with one hundred and twenty bushels in a day, and buy the finest of fruit at four to six cents per quart, as is done in the height of their seasons in our market. I am told an Eastern nurseryman, who has been in the business some forty years, pronounces the system absurd.

If the writer had read the works of all botanists who have written on the strawberry, during the life of Linnæus, and since his day, he would speak with more modesty. We have not an ignorant gardener, who attends our market, who does not better understand this plant. The same writer says the Hudson Bay strawberry is thrown by as worthless. Yet this is one of the largest, most productive, and of superior quality, and more cultivated in our State, especially for market, than any other. They are discarded because the character of the plant is not known. An acre of the male or female plants, by themselves, would not, in one hundred years, produce a single perfect fruit. I will give the writer, or any other nurseryman, one hundred dollars for a single root of Kean's seedling, or any other variety, so perfect in stamens and pistils, as to produce a full crop of fruit, equal in size to the discarded Hudson, or Hovey's seedling, where not placed contiguous to male plants. Few nurserymen understand the subject, for a plain reason. Within a narrow space they cultivate some twenty or more varieties for sale. Among so many varieties they will have more or less male plants, and the wind and bees carry the pollen from bed to bed. This I pointed out to Mr. Buist, who set out a bed of female plants, which he supposed would never fail to produce a full crop, one hundred feet distant from all others, and subsequently wrote me they did not produce a single perfect fruit. This subject has been for the last eighteen months before our Horticultural Society, and the question submitted to a large committee of talented botanists and market gardeners. Their report will be made soon after the blossoming season. Those whose past experience did not enable them to give a decided opinion, after one season's experiment, requested another year to make up their report, intending this spring to report their experiments. Mr. Hovey has promised to test the matter as relates to his own seedling, and I shall expect to hear from him as soon as the flowering season is over. I will cheerfully pay him one hundred dollars, for a single root of his seedling, that will, separate from all other plants, yield a full crop, of usual size. It would be worth thousands of dollars to the United States alone.

N. Longworth.

For the Farmers' Cabinet.

Destruction of Grape-vines.

Mr. Editor,—I have some very flourishing grape-vines of the Isabella, Catawba and Madeira varieties, which in former years used to contribute to my use and pleasure as well as repay all labour and attention to them, by the abundance of excellent fruit which they produced;—but for two or three years past I have scarcely been gratified by the sight of a single perfect bunch.

The failure of the crop has been caused by the depredation of small green worms, in hosts innumerable, which attack and consume the foliage, ranging themselves round the border, on the under side of the leaf, with all the regularity of a drill sergeant.

I have tried all my ingenuity to dislodge and annihilate the enemy, but without success. Smoke, from offensive combustibles, tobacco, &c., and even from brimstone matches, had no effect; soap-suds and lime-water also failed.

I then attempted removing the infected or rather infested leaves daily, with shears, and casting them by the basket full into the fire, but in this I only succeeded in aiding the destruction of the foliage.

Will you please inquire of your numerous subscribers, whether any of them have been so annoyed, and have succeeded in finding the genuine "worm bane?" B.

Coatesville. Pa., April 14th, 1845.

We shall be not a little gratified if some of our readers should be able to answer the wishes of our friend, for it is not in the country alone, but in the city also, that these pests commit their depredations.—Ed.

Potatoe Sugar.—The growers of potatoes in the British Kingdom are likely to be benefited by the exertions of the home sugar manufacturers, who are now determined to purchase all that comes within their reach. At the manufactory of potatoe sugar at Stratford, in Essex, and other places, we understand that the "fruit of the earth"—potatoe—will be taken in any quantity, and at a fair price. We have no doubt that the juice of the cane is superior to the meal of the potatoe, but we have positive proof that the potatoe can make up in quantity what is deficient in quality, and as no one can question the nutriment in the potatoe, we do not see why potatoe sugar should not be as advantageous to the tea or coffee table as the potatoe is to the dinner table; be this as it may, we have it on good authority that three tons of the raw material will produce one ton of the manufactured article, and consequently the British manufacturer can successfully compete with the foreign and colonial producer, and pay the same duty as that which is levied on the sugar imported from the colonies.—*Mass. Ploughman.*

From the Southern Planter.

Fruit Trees.

I promised to give you the result of an experiment which I had made with tar in preserving the peach and nectarine trees. It is so very simple and cheap that all admirers of good fruit may have flourishing trees and a chance for eating good fruit. As soon as the scion attains the size of a man's finger, which is generally about the first of autumn, remove the earth from about the root and deposite around the stock of the tree a half pint of soft tar, rubbing at the same time the body of the scion for six or eight inches above the surface with tar; then replace the dirt previously removed. This process must be repeated each succeeding year, say in the month of June, increasing the quantity of tar according to the growth of the tree. My own experience enables me to say, that this recipe is infallible. George C. Dodson.

Mayoning, Va., Jan. 31st, 1845.

Composition to render wood incombustible.—Take a quantity of water, proportionate to the surface of the wood you may wish to cover, and add to it as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution first a quantity of flour paste of the consistency of common painter's size; second, a sufficiency of pure clay, to render it of the consistency of cream.

When the clay is well mixed, apply the preparation as before directed to the wood; it will secure it from the action of both fire and rain. In a most violent fire, wood thus saturated may be carbonated, but it will never blaze.

If desirable, a most agreeable colour can be given to the preparation, by adding a small quantity of red or yellow ochre.—*Buffalo Com. Adv.*

Malay Apple.—The Malay Apple, an East India fruit, is now raised at Vicksburg, Mississippi. Its scientific name is *eugenia iambosia.* In the East Indies, the native clime of this fruit, the tree grows to a height of twenty feet; at Vicksburg it is only five feet in height. The apples are about the size of a small peach, with a similar colour, fragrant smell, and have the taste of a very sweet common apple, with one seed in the centre, of the size and colour of a chesnut. —*Western Farmer and Gardener.*

Saving Manures.

"*Nothing must be allowed to run away in the form of a fluid, or to fly away in the disguise of a smell.* * * * Mark out a piece of ground on which the dunghill is to be made, on a good slope, if possible, and close by a pond. Cut a gutter all round, and puddle it with clay, so as to make it water-tight. Then, at the lowest part, outside the place where the dunghill is to lie, dig a sink-hole 18 or 20 inches deep; let this be well puddled, and connected with the gutter already spoken of. Things being thus prepared, throw down a layer of manuring substances, about a foot deep; tread them well down, and scatter some fixer over it;—finally, water it well. In this manner go on, with layer after layer, till the heap is the desired height. During the operation of making the heap, some water will have drained away; in that case, it will have run into the gutter, and been collected in the sink-hole. Scuppet the water out, as the work proceeds, and throw it back on the dunghill. If the hole is not large enough, another can be made near it;—none of the drainings *must on any account be lost.* It should have, at least, once a week, for a month, a good quantity of fluid thrown upon it. Pot-boilings, and soap-suds, are much better than common water; but urine is preferable to both. By these contrivances nothing is allowed to leak, but the dunghill becomes a soft mass, holding fast all which belongs to it, except what flies away. To catch the latter is the *purpose of the fixer.* There are many kinds of fixers,—oil of vitriol, green vitriol, blue vitriol, salt and lime, —not either salt or lime by themselves on any account—gypsum, &c., may be used; but some of them at all times, and in some cases all of them, have the fault of costing money. A substitute which costs nothing except labour, is, therefore, to be sought for. Such exists in cinder siftings, charcoal dust, good black earth, peat or bog mould, rotten sawdust, leaf mould, black mud from ponds, bottoms of wood stacks, soot, brick-dust, burnt clay, &c. Some or all of these, may be had in most places."

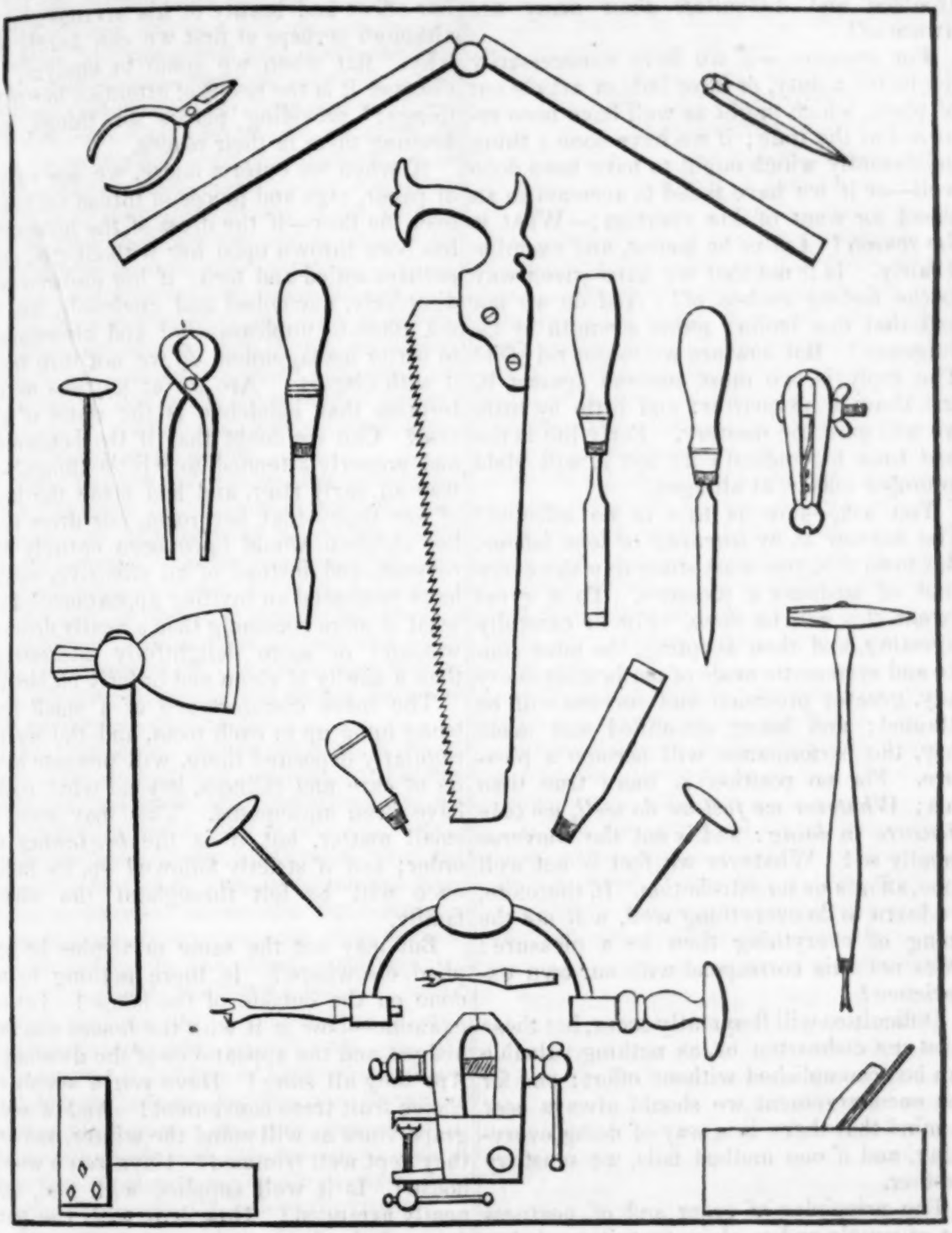
Mr. H. S. Thompson, of Kirby Hall, at the late meeting of the Yorkshire Agricultural Society, at Doncaster, recommended the plan he adopted, which was "to have a pit dug in the earth in which to throw the manure, instead of having it piled up on a heap. The bottom of the pit is water-tight, and has a slope towards the centre, where a tank is placed so as to receive the drainings from the manure. These drainings are frequently poured over the manure, so as to keep up a regular, but not excessive, fermentation. He was in the habit of collecting all the couch-grass, stubble, and other vegetable refuse which the farm afforded, and spreading it on the bottom of the pit to the depth of six or eight inches. This, when well soaked with the liquor that drained from the manure which was carted upon it, and fermented together with that manure, was, he believed, as good as any other portion of the heap. In this way he had, last year, on a farm of two hundred acres of arable land, increased his manure by two hundred single horse loads, which was equivalent to four additional loads per acre, for his fallow crops. If the manure was wanted for immediate use, it should be lightly thrown together, and, after being well soaked with tank liquor, have a thin covering of soil to absorb the gases which would otherwise escape. In this case, it must be carefully watched and well watered, from time to time, to prevent the fermentation from becoming excessive. If the manure is to be kept six months or more, it should be made solid by carting over it, and have a thick covering of soil, which would nearly exclude the air. In this way manure may be preserved for a year almost without loss. In very dry weather, the drainings from the manure are not sufficient to keep it moist, and it becomes necessary to saturate it with some other liquid. If the farmer has other tanks on his premises, it would be better to use their contents for this purpose, but where such are not at hand, plain water may be used, and has been found to answer exceedingly well."—*Economy of Waste Manures.*

Silk Culture in Ohio.

In a letter from J. W. Gill, of Mount Pleasant, Ohio, to the Ohio Cultivator, under date of "Feb. 25th, 1845," he says:

"We have furnished constant employment in the factory alone, to fifty persons, besides those employed during the summer in growing cocoons; have purchased cocoons and reeled silk to the amount of over four thousand dollars, which were procured from Jefferson, Belmont, Guernsey, Crawford, Washington, Franklin, Harrison, Carroll, Muskingum, Hamilton, and several other counties in Ohio. Also, some from Pennsylvania, Virginia, Indiana and Illinois, with considerable from Kentucky and Tennessee, —we have used no foreign silk whatever— from which, with our previous stock, we have manufactured over eight thousand dollars worth of goods, and have more than five thousand dollars worth in its various stages of progress, from reeled silk to warp in the looms, on which to operate until a new crop is grown."

A SEPARATE PLACE FOR EACH THING, AND EVERY THING IN ITS PLACE.



——"Order was Heaven's first law,
Earth's first blessing."——

For the Farmers' Cabinet.

Order--Carefulness.

If we properly considered our true interest, and indeed our own convenience, we should be led to see the importance of the moral influence resulting from *habits* of *order*.

Even children perceive the beauty and advantages of care and neatness; and almost instinctively acquire the practice, from the example of those with whom they are associated.

Some persons plead, they have no turn for such things; and therefore they are excusable for their neglect. But this is a mistake. The real difficulty arises from a feeling of which some are scarcely conscious; and which few are frank enough to acknowledge. Is it not to save ourselves a little trouble? Is it not self-indulgence? To be plain—is it not indolence? And does not the indul-

gence of this feeling cause more of our troubles and difficulties than many are aware of!

For instance,—if we have unnecessarily neglected a duty, or have left an article out of place, which might as well have been returned at the time; if we have done a thing indifferently which ought to have been done well—or if we have failed to accomplish an object for want of due exertion;—What is the reason? Let us be honest, and examine it fairly. Is it not that we have given way to the feeling spoken of? And do we not find that this feeling gains strength by indulgence? But how are we to get rid of it? The reply is, we must contend against it, and show it no quarter; and little by little we will gain the mastery. Early life is the best time to eradicate it; but it will yield to proper efforts, at all ages.

You ask,—how is this to be effected? The answer is, by *learning to love labour.* But to do this, you must study to make every kind of business a pleasure. To a great extent this can be done. For by carefully digesting, and then adopting, the most simple and systematic mode of performing every duty, greater precision and success will be attained; and being simplified and made easy, the performance will become a pleasure. For no position is more true than this; *Whatever we feel we do well, we take pleasure in doing:* and is not the converse equally so? Whatever we feel is not well done, affords us no satisfaction. If, therefore, we learn to do everything well, will not the doing of everything then be a pleasure? Does not this correspond with our own experience?

Difficulties will frequently occur, but these must not dishearten us, as nothing valuable can be accomplished without effort; and for our encouragement we should always bear in mind that there is a way of doing everything, and if one method fails, we must try another.

The principles of order and of neatness are so simple and so plain, that it needs but moderate attention to understand them; and but reasonable effort to put them in practice: but that effort must be continued and persevered in, until we succeed. For step by step we shall gain on our deficiences; and the consciousness of some progress will encourage further exertion. We should never forget that to become fitted to train others, it is especially needful we should first discipline ourselves.

An eminent and successful agriculturist, when asked what made a good farmer, replied, "To mind little things." When we visit a neighbour who is remarkable for good management, we are struck with the peculiar effect and beauty of his arrangements; although perhaps at first we can hardly tell why. But when we come to analyze, we discover it is the result of attention to "little things;" providing places for things, and keeping them in their places.

If, when we enter a house, we see scraps of paper, rags and pieces of thread scattered over the floor—if the dress of the housewife has been thrown upon her without care, and perhaps soiled and torn: if her children are disorderly, uncombed and uncleanly, does it not affect us unpleasantly? and accustomed to better management, do we not turn from it with disgust! Are we at any loss to determine that indolence is the cause of all this? Can we doubt that if the housewife had properly attended to "little things,"—was an early riser, and had made the best of her time—that her room, her dress and her children, would have been entirely the reverse, and instead of an offensive, would have presented an inviting appearance? For what is more becoming than a neatly dressed woman? or more delightfully interesting, than a family of clean and orderly children!

The mere circumstance of a small bag being hung up in each room, and the scraps regularly deposited there, will promote habits of care and tidiness, beyond what could have been anticipated. This may seem a small matter, but it is the *beginning* of order; and if strictly followed up, its influence will be felt throughout the whole family.

But may not the same principles be applied elsewhere? Is there nothing to be done on the outside of the house? Let us examine—how is it with the fences and the hedges, and the appearance of the dwelling! Are they all snug? Have you a supply of choice fruit trees convenient? And of such grape-vines as will stand the winter, and are they kept well trimmed? Have you a wood-house? Is it well supplied with fuel, and neatly arranged? How is it with the garden and the front yard—and the lane—and the barn-yard, and the barn? Are they in good condition? Have you scrap bags there! or in other words, have you suitable places for unsightly things—for such things as cause disorder and litter your premises; and serve as examples of mismanagement and waste to those about you? If you have not, why is it? How can you expect them to be careful, when you are careless; to be industrious, when you are slothful; and to be saving, when you are wasteful? If you permit this state of things, do you not encourage it? and is it not really teaching them the reverse of what your interest re-

quires! Do you not see it? If you do, then rouse up to your duty; and set a better example for the future. For do you not remember that whenever you have done so, how pleasant has been the result! Shall the example of a wise Providence be lost upon us, and shall we not be improved by what was intended for our instruction as well as our benefit! Observe the operations of nature! How beautiful! How admirably adapted to their end!—the order—the regularity—the wonderful economy! nothing in vain—nothing wasted—nothing lost!

But you say you have not time to attend to these things: are you aware how much of your time, as well as your property, will be saved in the end? In laborious matters we may be industrious, and yet omit small ones through negligence.

You rise early of course, but is all your time employed to the best advantage? Do you note the fragments of it that are wasted by yourselves, and by those around you? You see then it is not for want of time; it is for want of properly employing it—it is for want of method; and no one can fill up the full measure of his usefulness without it. You are saving of your money, then why not economize your time.

We should all remember that it is our duty, and indeed our interest, to instruct others as well as to improve ourselves; and it may be truly said, that he who can accomplish and teach others to perform with ease a double amount of duty, is as much a benefactor as he who causes the "two blades of grass to grow where but one grew before." To assist you in the object contemplated, provide a small book with but *two leaves*, and as they occur to you, note in it such little matters as may require care; you will then be able to attend to many things which are now neglected, because not thought of at a leisure time. But this book must be examined *daily*, and cleaned up as often as possible; for if the items are suffered to accumulate, the book will lose its virtue.

Are there not some other things to be looked after? Where are your implements of labour—your ploughs; your harrows; your hoes and your shovels; your forks; your rakes and your scythes? Are they in good condition, and in their proper places; or are they scattered about and exposed to the weather, and some of them mislaid, or lost?

Have you a tool-house? Have you a workshop? If you have not, there must then be some disorder; and is not that the cause? For a deficiency of care in one respect generally leads to it in others; and it is the *habit* of care you must acquire.

Would you know the secret of having things *keep in their places?* then provide suitable places for them; and have a distinct and separate place for each.

But these places must be convenient and easy of access; and the articles must be arranged with some taste, and so as to produce a pretty effect. This will be pleasant to the eye, and will awaken a feeling of interest in those in your employ, and each one will take pleasure in promoting the object. To *ensure* success, however, you must go further. You must mark in *outline* the exact shape of each article upon the wall or partition against which it may be placed. Try it and you will be astonished at the result; it will act like a charm in restoring things to their places. And from it you will derive a further advantage, as you will thereby be enabled at a glance to see exactly what implements and tools belong to you, and more pains will be taken to keep them fit for use. And if at any time they should be left out of place, or be lent to a careless neighbour, you will be continually reminded of it until they are returned, and thus often saved from loss.

The good effects of the plan will not stop here, for its successful operation will be a valuable example in the neighbourhood, and a practical illustration of the beauty and usefulness of *order*.

It will also serve to fix in the minds of those about you, a *principle* applicable in various other forms, and it will gradually produce an effect upon their habits that will, more or less, influence all their conduct.

MIQUON.

Note.—The diagram at the head of this article is a copy of a closet recently fitted up, and comprises most of the tools that would be needed for a family. For a farmer, a greater variety would of course be required. But the design of the plate, is to show that any set of tools or implements may be so arranged as to present a symmetrical and tasteful appearance; by selecting some prominent article as a point or centre, and radiating, or otherwise arranging the others around it.

The tools are secured in their places by *staples* made of wire, and by small brass or iron hooks, or by nails. One of the awl handles is hollow, and contains about a dozen blades of different shapes, each of which will fit firmly into the other handle. The shape of the tools as there represented, was marked out by a small stiff brush, and with ink. The cost of the tools at retail price, was $8 67.

The foregoing remarks of our worthy friend may serve as the heads of half a dozen chapters. They

will afford food for reflection to all, but more especially to our younger readers, whose habits are being formed, and who are perhaps scarcely aware of the practical importance of the views here inculcated. We can assure them, they come from one who practices what he preaches, and whose daily habits afford a happy illustration of his sentiments.—Ed.

Silk.

At a meeting of the New York Farmer's Club on the 1st ult., President Tallmadge said: "On the subject of silk, a few words. In the first place, I venture to suggest that it is the most interesting subject that could be brought under the consideration of this nation. Whether as it relates to our prosperity, wealth, or national pride, it has no equal. The question is often asked, why has not silk yet been cultivated in America? Ours was a new country: we were in no condition to undertake it until recently. I maintain that we are peculiar in our national advantages for the silk culture. No country on the globe, except China, can compete with the United States.

The silk worm cannot exist but in warm and dry climates. China and the United States are both on the eastern sides of continents, and the prevailing winds pass from the western board over great tracts of land and mountains, and become dry before they reach the United States on this continent, or China, on the other; while the western shores of Europe, receiving the humidity of the ocean, are all more moist by much than we are. On this subject of climate, as affecting the silk worm, there is no country except China and the United States, in which the silk worm hatches without artificial means. The warmth of the bosom, or some contrivance, is found indispensable to the hatching, in all other countries. This is a most extraordinary natural adaptation for silk in America. We now have numerous and various mulberry trees; the wild multicaulis speculation is over, and forever, I hope. We now want more extensively the trees, the domestic rearing of the silk worm, and above all the best filatures. In Georgia cocoons are raised, but for want of filatures, the silk has in some cases actually been used to make *well ropes* and *wagon harness*. I have the pleasure to announce that Mr. Van Epps and Mr. Smith have been encouraged by the American Institute to establish a competent filature. We then shall want the manufacturing process; and I think myself safe in dating from this day the glorious work of American silk! We have persons coming, and some have already come, from Europe; and we shall learn the arts of making, dyeing, and manufacturing silk fabrics. This great staple has now reached, like the point of the wheel, its passing place, and will henceforward maintain its constant motion. In sewing silks, it is said that in the first process gum is extracted to 26 per cent. of the weight of the silk, and afterwards in dyeing, the French chemists know how to restore 18 per cent. of that lost weight; while our chemists or dyers here can restore but 12 per cent., making six per cent. against us.

"American farmers will erect a monument in their hearts, if not one of marble, to him who shall introduce a new staple. As to our grain, we never can, in any event—corn laws or no corn laws—supply England with grain. Europe is ready in a moment to glut any open port of England with bread stuffs—and they raise the wheat with hands at 18 cents per day—while ours have 75 cents per day. Long may it be so. I avow my purpose to be, to maintain high rewards for labour, to hold it elevated above the depressed labour of Europe. Agriculture is bound to rejoice at this introduction of silk; great will be the individual and national results. Suppose that we had never manufactured a yard of cotton, or of broadcloth, we should now be wearing the wretched *Hum Hums* of past days, at several shillings per yard, instead of cents—and broad cloth at about double the present prices, and our sheep would be extirpated. Now the moment we began to manufacture cotton—look. England's five per cent duty on American raw cotton disappears! Our farmers are all interested in this, for it brings down prices of manufactured goods. I repeat it—the farmer has the deepest interest in every measure that brings down prices and extends here a home market for the produce of his farm. He must make his market here, for he is shut out of Europe.—*Farmer and Mechanic.*

For the Farmers' Cabinet.

Disease of the Potatoe.

Mr. Editor,—I have recently read a number of articles upon the "Disease of the Potatoe;" and have been struck with what seems to me a deficiency in the reasoning on the subject. I formed an opinion in relation to the matter more than a year ago, in consequence of some investigations I then made, and subsequent readings and examinations have confirmed that opinion. I will give it to you for what it is worth. If it is

not correct, perhaps it will lead to the truth—in which case I shall be abundantly repaid for my trouble.

It is well known that the substance forming the cells of all plants, is a compound of nitrogenous matter with one or more of the alkalies, together with silex, &c. It is also well known, that if the cellular matter is deficient in alkaline substances, &c., it is comparatively weak, and unable to contain the matters deposited in it. It is well known, too, that the alkalies regulate the formation of the acids in the healthy vegetable, and that when there is not a sufficient supply of alkaline bases, the vegetable either contains a superabundance of acid or its growth is impeded. In the former case the vegetable is not fit for culinary purposes.

Now, I believe, that in the case of the disease of the potatoe, the cause is a deficiency of alkaline bases. This is manifest in the want of power in the cellular substance to perform its office, and it is also manifest in the presence of acid in the potatoe.

In consequence of this deficiency of alkaline substances, the potatoe plant forms an alkali peculiar to itself, which is very poisonous in its nature; and which, I doubt not, produces the fatal effect sometimes consequent upon eating the diseased potatoe.

If this theory be correct, the proper remedy is to supply the alkaline substances, such as lime, good strong ashes or soda, one or more of them; and not use quite so much or so rich manure as is commonly used.

CHEMICO.

Honesdale, Pa.

Inland Navigation to the West.

THE rolling flood of waters now pouring along by the Ohio, and the vast distances to which products are borne by the numerous steamers on its bosom, remind us of the great, and, compared with any other portion of the earth, most extraordinary extent of the inland navigation of the West. Let us take some particulars. It is considered a great voyage from New York to Liverpool; yet one may take a single steamboat trip on the waters of the Mississippi equal to that. Look at this:

	Miles.
New Orleans to Natchez,	294
Natchez to the mouth of Ohio,	718
From the Ohio to St. Louis,	172
St. Louis to Weston,	500
Weston to Council Bluffs,	300
Bouncil Bluffs to Fort Mandan,	824
Fort Mandan to the Yellow Stone,	224
Total voyage,	3032

This is the length of a voyage from New York to Liverpool—all performed inland—the point of departure being one hundred miles from the sea! Such is one of the voyages that may be performed in the great valley of the West.

But take another: suppose a boat takes in produce from Pittsburg to New Orleans, and should there be chartered to take stores to the Fur Company's Fort, at the mouth of the Yellow Stone, and then returns to Pittsburg, what will be her voyage:

	Miles.
Pittsburg to Cincinnati,	498
Cincinnati to Louisville,	137
Louisville to mouth of Ohio,	345
Mouth of Ohio to New Orleans,	1012
New Orleans to St. Louis,	1184
St. Louis to Weston,	500
Weston to the Yellow Stone,	1348
Yellow Stone to St. Louis,	1848
St. Louis to the Ohio,	172
The Ohio to Pittsburg,	980
Total voyage,	8024

Eight thousand miles might a steamboat run on the waters of the West in a regular voyage, before she returned to her original port!—*Cincinnati Chronicle.*

ARTIFICIAL EGG-HATCHER.—Your correspondent "Sessima," (*Gardener's Chronicle*, Nov. 30th,) asks, "Can any one inform us of the success of this instrument? Is there more than one kind of it?" At the late exhibition of the Smithfield Club, there was an ingenious machine for this purpose, exhibited by Mr. Bermingham, and called the Portable Couvoise. It is made of tin, contained in a wooden case—is very portable, and the price very moderate, as a machine capable of hatching two dozen eggs, may be had for 3*l.* 3*s.* or 4*l.* 4*s.* The machine is in extensive use in France—not only for game, but on the farm-yard.

THE Penny Postage, so successful in England, has given rise to another and important reform. Parliament has introduced a provision in the charters of rail-road companies, compelling each to carry third class passengers at a rate not exceeding a penny a mile. Many of the leading roads heretofore incorporated have taken the hint and reduced their fare, and now thousands are in the habit of visiting their friends residing at a distance, seeing curiosities and new places hitherto deemed inaccessible in consequence of high rates.

Sugar Cane in Western Georgia.

Colonel James M. Chambers, of Columbus, in writing to the Southern Cultivator, gives the following description of a visit to the farm of Judge Taylor, in Randolph county:

"The next day I passed to the house of Judge Taylor, in the county of Randolph. The Judge is living on his farm in the neighbourhood of Cuthbert, and is full of the spirit which a personal and practical knowledge of planting is so well calculated to beget. He invited me to see his process of making syrup or molasses, from a little patch of sugar-cane which he had cultivated last year. Everybody knows that molasses may be made from the cane, and this is not therefore the fact which I propose to report, but the yield. This is the point of interest, and I doubt not will be of astonishment to nine-tenths of those who hear it. He had cultivated not quite three-fourths of an acre in cane—common ribbon—on very common pine land, a little manured. At the time of my examination, he was just filling the second hogshead of 80 gallons each; and said he had cane enough to make 40 gallons more—making 200 gallons of good syrup—and he had seed cane enough left to plant two and a half acres. This would be at the rate of nearly or quite 300 gallons of syrup to the acre, appropriating from the crop only seed enough to plant the same quantity of land again. This, at twenty cents per gallon, would be sixty dollars per acre; and he assured me that it was not more difficult of cultivation than Indian corn, and the process of boiling not half so tedious or complicated as the making a kettle of soap. The mill for grinding the cane is a simple and cheap affair, which can be put up by any rough workman, and need not cost a planter more than ten dollars."

To Sweeten Rancid Butter.—The *Echo du Monde Savant* says: "An agriculturist in the neighbourhood of Brussels, having succeeded in removing the bad smell and disagreeable taste of some butter, by beating, or mixing it with chloride of lime, he was encouraged by this happy result to continue his experiments, by trying them on butter so rancid as to be past use; and he has restored to butter, whose odor and taste were insupportable, all the sweetness of fresh. This operation is extremely simple and practicable for all. It consists in beating the butter in a sufficient quantity of water, in which put twenty-five or thirty drops of chloride of lime to two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn, and washed anew in fresh water. The chloride of lime having nothing injurious in it, can with safety be augmented; but, after having verified the experiment, it was found that twenty-five or thirty drops to two pounds of butter were sufficient.—*Chatham (Canada) Gleaner.*

For the Farmers' Cabinet.

Engrafting.

Mr. Editor,—In the spring of 1844, I put several engrafts on a large apple tree—whip engrafting—and as I supposed, by subsequent observation from the ground—for I did not ascend the tree and examine minutely,—without success.

During the present month I ascended the same tree, in order again to try to alter its character, when to my astonishment, many of the engrafts which had been put on a year previously, were, for the first time, just commencing to expand their buds. Not having seen, in my horticultural reading, any account of such occurrence, therefore my astonishment.

If limbs within reach, or small trees had permitted my engrafts to remain thus dormant, I should have considered it *prima facia* evidence of their failure, and should not have hesitated to remove them with that portion of the *stock* above the best shoot, in order to have a fine branch for inoculation in August or September. But it appears from the foregoing, that the horticulturist may say, as well as the doctor, *dum spiro spero*, whilst there is life there is hope. So long as the engraft retains its vitality there is a possibility of its growth.

I shall not now attempt the physiological explanation of the above fact, but shall make further experiments. If it be well known to nurserymen—with whom you often have opportunities to converse—please suppress the above, and oblige J. K. E.

Paradise, Pa., April 26th, 1845.

Mammoth Hog.—S. G. Allen, landlord of the *Franklin House*, Jersey Shore, Pa., slaughtered a hog a few days since, only 18 months old, which weighed, when dressed, *seven hundred and six pounds!* This hog was raised by Mr. Allen, and never received more than ordinary keeping or attention. He was of the John Coursey breed, with a small sprinkling of Berkshire. Had he been kept until the 1st of April, he would, no doubt, have weighed one thousand pounds! Mr. Allen had also in the same pen, a pig three months old, which weighed 86 pounds!—*Exchange paper.*

From the Cultivator.

Experiments in the Culture of Indian Corn.

We are indebted to our friend George Geddes, Esq., of Onondaga county, N. Y., for the following detailed account of several experiments made by him, with great care, the past season, in the culture of Indian corn. They will be read with interest, and our readers will be glad to learn that these experiments will be continued with the same exactness the ensuing season. Mr. Geddes says:

The soil is a deposit of gravel mixed with sand and clay, resting upon a gypseous shale. The previous course of cultivation has been as follows, viz: In 1837, a crop of corn was raised on a heavy sod turned under that spring, and slightly manured with barn-yard manure. The yield was estimated at 65 bushels to the acre. In 1838, corn was again raised, and without any manure; estimated to yield 50 bushels to the acre. In 1839, it was sown with oats, and yielded a very heavy crop. Grass seed was sown with the oats, which succeeded well. The next four years it was pastured. Plaster was put on both corn crops and on the oats, and once or twice on the pasture.

The ground was ploughed about the first day of May, six inches deep, and planted on the third and fourth days of that month.

The variety of corn was the improved Dutton; that is, Dutton that had been selected from the earliest ears for a series of years.

Experiment No. 1.—One acre was planted in hills three feet apart each way, six kernels in the hill. Fifty loads of half rotted manure was put on this acre after it was ploughed, and harrowed in as well as it could be done; it being so coarse that it piled up a great deal before the harrow. The hills had a hoe full of the best of the manure drawn in by the planter, and the corn dropped into it. It was hoed twice, and a cultivator was run once along each row *both ways*, at *each hoeing*. The account of the cost of cultivation, is as follows, viz:

To ploughing and harrowing one acre,	$1 50
50 loads of manure, drawing and spreading,	12 50
2 days' work of one man planting,	1 50
cultivating for both hoeings,	50
hoeing twice, 3 days' work,	2 25
harvesting, 3½ days' work,	2 63
	$20 88

The product was 70½ bushels—at 4*s.*=$35 25—20 88=$14 37 for the use of the land; or the corn cost, besides the use of the land, $0 29.6 per bushel.

Experiment No. 2.—The other acre was cultivated as follows: One-tenth was planted in hills three feet by two apart, six kernels in a hill, and *without any manure*. The account of the cost of cultivation is as follows, reduced to acres.

To ploughing and harrowing one acre,	$1 50
planting 2 days,	1 50
cultivating,	50
hoeing twice, 4½ days,	3 37
harvesting 3 days,	2 25
	$9 12

The product was sixty and one-quarter bushels to the acre, at 4*s.*=$30 12—9.12=$21 00 for the use of the land; or the corn cost besides the use of the land, $0 15.1 per bushel.

Experiment No. 3.—Another tenth was planted the same distance apart, and the same number of kernels in the hill as the last—and was manured, by filling each furrow as it was ploughed, full of barn-yard manure, *unfermented*—the amount used being at the rate of 150 loads to the acre. The cost of production was as follows, reduced to acres:

To ploughing and harrowing one acre,	$1 50
2 men to fill the furrows with manure,	1 50
2 days' work planting,	1 50
4½ days' hoeing,	3 37
cultivating,	50
3 days' harvesting,	2 25
150 loads of coarse manure,	18 75
	$29 37

The product was seventy bushels to the acre, at 4*s.*=$35 00—29 37=$5 63 for the use of the land; or the corn cost, besides the use of the land, $0 42 per bushel.

Experiment No. 4.—Another tenth was the same distance apart, and the same number of kernels in the hill as the last, and manured with coarse manure in the same way, and had beside, a top dressing of half rotted manure, at the rate of twenty-five loads to the acre. The cost of production was as follows, reduced to acres:

To ploughing and harrowing one acre,	$1 50
150 loads of coarse manure,	18 75
25 " fine "	6 25
2 days' work to put manure in furrows,	1 50
2 days' planting,	1 50
4½ days' hoeing,	3 37
cultivating,	50
4 days' harvesting,	3 00
	$36 37

The product was eighty bushels to the acre, at 4*s.*=$40 00—36 37=$3 63 for the use of the land; or the corn cost $0 45.5 per bushel, besides the use of the land.

Experiment No. 5.—Another tenth was planted in drills, three feet apart, the corn four inches apart in the drills. It was manured with 25 loads of half rotted manure

to the acre, put on after the ploughing. The cost of production was as follows, reduced to acres:

To ploughing and harrowing one acre,	$1 50
25 loads of manure,	6 25
drilling in seed 4 days,	3 00
two hoeings, 3 days' work each,	4 50
cultivating,	50
harvesting (small ears) 4 days,	3 00
	$18 75

The product was fifty-five bushels to the acre, at 4*s.*=27 50—18 75=$8 75 for the use of the land; or the corn cost $0 34 per bushel, besides the use of the land.

Experiment No. 6.—The remainder of the ground was planted in hills three feet by two feet, six kernels in the hill, with a top dressing of twenty-five loads of half rotted manure to the acre. The cost of production was as follows, reduced to acres.

To ploughing and harrowing one acre,	$1 50
25 loads of manure,	6 25
2 days' work planting,	1 50
4½ days' hoeing,	3 37
cultivating,	50
3½ days' harvesting,	2 44
	$15 56

The product was sixty-five and one-half bushels to the acre, at 4*s.*=$32 75—15 56 =17 19, for the use of the land; or the corn cost, besides the use of the land, $0 23.7 per bushel.

It is proper to say, that the cost of labour for such small parcels, is a difficult thing to determine with perfect accuracy.

The stalks being of such equal value upon each piece, I have supposed it unnecessary to attempt any separate measurement; neither have I kept any separate account of the cost of the seed, for the same reason. The whole was plastered, but the expense being so slight, and costing the same for each piece, no account has been made of it. The manure is charged at its full value in each case, though the land is greatly benefited for future purposes. Hardly a quarter of its cost is justly chargeable to this crop. In No. 2, we have an example, in which the effects of the manure are easily traced through many years. The last manuring this piece had was in 1837—and it now produced 60¼ bushels to the acre. No charge being made against it for manure, it appears to be profitable above every other experiment. But if the account could be stated for a period of years for each piece of land as we have it for this year, I doubt not the manure would be found to pay fully all its cost.

These experiments were made chiefly to determine *how thick* corn should be planted —what is the *most convenient form to place the plants*—and whether the manure should be rotted and applied to the surface, or ploughed under unfermented. The conclusion that now appears likely to be arrived at is, that hills three feet by three feet apart, put in rows, so that a cultivator can be used both ways, is the most convenient form for cultivation, and that six kernels put into each hill, will make the corn thick enough. I counted, and made examinations that satisfied me, that at harvest my hills averaged five stalks to the hill—no thinning was done, except by insects and accidents. That this is not too thick, is proven by experiment No. 6, where the hills were three feet by two feet, the product being 65½ bushels to the acre, and with one-half the manure that was put on No. 1, which was three feet by three feet apart, and the product only five bushels more to the acre. In fact, I believe that more bushels with the same manuring would have been raised with the hills two by three feet, than three by three feet, but the extra labour of planting, hoeing and harvesting, will more than counterbalance the gain.

The labour required to plough under *unfermented* manure in any considerable quantity, is so great, and its great bulk compared with its value, making it so expensive to draw, and the fact that it is not felt until late in the season—and that the next ploughing must be deeper, in order to bring it all up and mix it with the soil—are great objections to its use. That the next ploughing must be deeper, in order to bring up all the manure, is evident from the consideration that every time the soil is saturated with water it must sink deeper, unless it is held up by some stratum that is impervious to water. If the contents of the barn-yard are piled up in the spring as soon as the frost is out, and covered with gypsum so as to prevent the escape of any of its gases, and turned and re-piled at midsummer, and again covered with gypsum, the seeds of weeds will be destroyed, and the manure will be entirely rotted in time to put on the corn the next spring. The manure used in these experiments was but half rotted, in consequence of neglecting to turn and repile it. From the decrease of the bulk, the expense of handling and mixing the manure with the earth, will be so much lessened as fully to compensate for all the expense of piling and rotting it.

The cost of the gypsum, too, will be but slight, as but little is required; merely enough to whiten the heap. The corn will then have its stimulus at the time it needs it most; and but few weeds will spring up from the manure. All these considerations lead me to prefer fine manure to coarse.

It is worthy of remark that in No. 2, where no manure was used, the yield was 60¼ bushels—in No. 3, where 150 loads of unfermented manure were used, the yield was 70 bushels—a gain of 9¾ bushels to be ascribed to the manure; in No. 4, with the like amount of unfermented manure, and 25 loads of fine manure, the product was 80 bushels—a gain of 10 bushels to be ascribed to the fine manure—showing that one load of fine is worth more than six loads of coarse manure. While No. 6, which was manured with the fine only, yielded 65½ bushels—a gain of 5¼ bushels to be ascribed to the same amount of fine manure. Showing that one load of fine is worth about three and a quarter of coarse manure. But the land on which No. 6 was raised, was not as rich as Nos. 2, 3 and 4, owing to the fact that it was so situated in the field that it had not been as highly manured in those years gone by, when manure was only drawn out of the barn-yard "to get rid of it." Nos. 2, 3 and 4, were nearer the gate, and had been served about alike, and furnish the fairest test of the value of the different kinds of manure.

Some of the results obtained by these experiments were unexpected. The highest yield is very far below the great crops that have been reported. I know not why a hundred or more bushels to the acre were not raised on No. 4, with manure both on top and under the furrow, amounting to 150 loads of coarse and 25 loads of fine to the acre; and that too, along side of land that *without any manure*, yielded more than 60 bushels to the acre.

I purpose the next year to plant all of this ground with corn, and carefully measure the product of each piece, with a view of learning the effects of this manuring for the second year. GEO. GEDDES.

Soap-suds—Compost.

THIS is, perhaps, one of the most powerfully fertilizing articles produced on a farm. It contains the food of plants in a state of almost perfect solution, and consequently in a condition the most easy to be appropriated and assimilated when applied as a stimulant to vegetable life. In order to avail himself of this important source of wealth, the farmer should provide himself with a tank of a size sufficient not only to contain the suds made in the family, but a large quantity of other materials, such as sods, turf, bones, ashes, straw and muck;—in short any substance not actually and necessarily prejudicial to vegetation, and which may, partly by imbibing the liquid, and partly by chemical action become an ingredient in the food of plants. The tank or cistern provided for this purpose, should be proportioned to the size of the family, and so situated as to admit of an easy approach with the cart. It should also be so constructed as to be exposed as little as possible either to the washing of heavy rains, or the influence of the sun and air. We have often been surprised on visiting the premises and farm yards of some who have enjoyed an honourable reputation for economy in other matters, to find them cluttered and encumbered with useless rubbish, which a little time, properly devoted, would have reduced to a healthy and valuable assistant in the fertilization of a perhaps unfertile and unproductive farm. Bones, shells, chips, are all excellent ingredients in the compost heap, and will well reward any person for the trouble and expense of gathering them up. It is often the case that soil in low places by the road side, which receives the wash from the highway, may be converted into a valuable stimulant simply by throwing it into heaps. This, however, should be done in the fall, as the wash during the summer adds greatly to its stimulant powers, and the operation of the frost in winter conduces greatly to its improvement, by thoroughly breaking up and disintegrating the earthy particles composing the mass. Such soil, or indeed any other, moderately indued with fertilizing properties, and the powers of imbibing and retaining moisture, may be greatly increased in value by being placed in a situation where it will remain open to the action of rain and the elastic gases.—*Maine Cultivator.*

JUMP UP GIRLS.—An eastern editor, in reading a lecture to the girls, discourseth thus: "Up with you!—Don't sleep away this beautiful morning. Mary, Ellen, Abbey, Phebe, Sarah, Eliza, Jane, Caroline, Hannah! and all the lazy girls arouse—wake up—rise and see the sun shine, and brush away the dew from the beautiful grass. You not only lose the best portion of the day, while you linger in bed, but you depress your spirits and contract sluggish habits. What if you are sleepy?—Jump out of bed—fly around—stir about, and in a few moments you will be bright as larks. We wouldn't give a straw for girls that won't get up early in the morning. What are they good for? Lazy, dumpish creatures—they are not fit for wives or companions. Our advice to young men who are looking out for wives, would be—never select a girl who dozes away the precious morning hours. She may be a help-eat, but will never prove a help-meet."

From Bousingault's Rural Economy

Butter.

To understand the preparation of butter thoroughly, it is absolutely necessary to know the physical constitution of the milk from which it is obtained. Now the microscope shows us that milk holds in suspension an infinity of globules of different dimensions, which, by reason of their less specific gravity, tend to rise to the surface of the liquid in which they float, where they collect, and by and by form a film or layer of a different character from the fluid beneath; the superficial layer is the *cream*, and this removed, the subjacent liquid constitutes the *skim-milk*. This separation appears to take place most completely in a cool temperature from 54° to 60° F.

Allowed to stand for a time, which varies with the temperature, milk becomes sour, and by and by separates into three strata or parts: cream, whey, and curd, or coagulated caseum. By suffering the milk to become acid before removing the cream, it has been thought that a larger quantity of this, the most valuable constituent of the milk, was obtained; and the fact is probably so; but in districts where the subject of the dairy has been most carefully studied, it has been found that it is better to cream before the appearance of any signs of acidity have appeared. When a knife can be pushed through the cream, and withdrawn without any milk appearing, the cream ought to be removed.

Butter is obtained from cream by churning, as all the world knows; by the agitation, the fatty particles cohere and separate from the watery portion, at first in smaller and then in larger masses. The remaining fluid is buttermilk, a fluid slightly acid, and of a very agreeable flavour, containing the larger portion of the caseous element of the cream coagulated, and also a certain portion of the fatty principle which has not been separated.

The globules of milk appear, from the latest microscopical observations, to be formed essentially of fatty matter, surrounded with a delicate, elastic, transparent pellicle. In the course of the agitation or trituration of churning, these delicate pellicles give way, and then the globules of oil or fatty matter are left free to cohere, which they were prevented from doing previously, by the interposition of the delicate film or covering of the several globules. Were the butter simply suspended in the state of emulsion in the milk, we should certainly expect that it would separate on the application of heat; but this it does not: cream or milk may be brought to the boiling point, and even boiled for some time, without a particle of oil appearing. Could M. Romanet show any of these pellicles, apart from the oil-globules they enclose, it would be very satisfactory, and would certainly enable us to explain the effect of churning.

Churning is a longer or shorter process, according to a variety of circumstances; it succeeds best between 55° and 60° F. So that, in summer, a cool place, and in winter a warm place, is chosen for the operation. There is no absorption of oxygen during the process of churning, as was once supposed; the operation succeeds performed in vacuo, and with the churn filled with carbonic acid or hydrogen gas.

On being taken out of the churn, the butter is kneaded and pressed, and even washed under fair water, to free it as much as possible from the buttermilk and curd which it always contains, and to the presence of which must be ascribed the speedy alteration which butter undergoes in warm weather. To preserve fresh butter it is absolutely necessary to melt it, in order to get rid of all moisture, and at the same time to separate the caseous portion. This is the process employed to keep fresh butter in all the warmer countries of the world. In some districts of the continent, it is also had recourse to with the same view. The butter is thrown into a clean cast-iron pot, and fire is applied. By and by the melted mass enters into violent ebullition, which is owing to the disengagement of watery vapour; it is stirred continually to favour the escape of the steam, and the fire is moderated. When all ebullition has ceased, the fire is withdrawn, and the melted butter is run upon a strainer, by which all the curd is retained. M. Clouet has proposed to clarify butter by melting it at a temperature between 120° and 140° F., and keeping it so long melted as to dissipate the water and secure the deposition of the cheesy matter, after which the clear melted butter would be decanted. I doubt whether by this means the water could be sufficiently got rid of, a very important condition in connection with the keeping of butter, though certainly all the caseum would be deposited.

The moisture and curd contained in fresh butter may amount together to about 18 per cent.; at least we find that we lose about 18 lbs. upon every 100 lbs. weight of butter which we melt at Bechelbronn.

The information which we have on the produce in butter and cheese, from different samples of milk, is very discordant, so that I prefer giving the results of a single experiment made under my own eye. From 100 lbs. weight of milk, we obtained:

Cream	15.60 lbs.
White curd cheese	8.93 "
Whey	75.47 "
	100 00

The 15.60 lbs. of cream yielded by churning:

3.33 lbs. butter, or 21.2 per cent., and
12.27 " buttermilk.

The reckoning with reference to 100 lbs. of milk consequently stands thus:

Cheese	8.93
Butter	3.33
Buttermilk	12.27
Whey	75.47
	100.0

Taking the whole of the milk obtained and treated at different seasons of the year, I find that 36,000 lbs. of milk yielded 1080 lbs. of fresh butter, which is at the rate of 3 per cent. From the statement of M. Baude, it appears that near Geneva a proportion of butter so high as 3 per cent. is never obtained, probably because there a larger proportion of fatty matter is left in the cheese. In the dairy of Cartigny, 2200 gallons of milk gave:

Butter	363 lbs.	or about	1.6 per cent.
Gruyere Cheese	1515 "		6.9 "
Clot from the whey, obtained by boiling	1140 "		5.2 "

In the same neighbourhood, another dairy, that of Lullin, gave from the same quantity of milk:

Butter	418 lbs.	or	1.9 per cent.
Cheese	1485 "		6.75 "
Clot from whey	968 "		4.4 "

Safety in Thunder Storms.

People are often led to inquire what are the best means of safety during a thunder storm. If out of doors, we should avoid trees and elevated objects of every kind; and if the flash is instantly followed by the report, which indicates that the cloud is very near, a recumbent position is considered the safest. We should avoid rivers, ponds, and all streams of water, because water is a conductor, and persons on the water in a boat would be most prominent objects, and therefore most likely to be struck by the lightning. If we are within doors, the middle of a large carpeted floor will be tolerably safe. We should avoid the chimney; for the iron about the grate, the soot that often lines it, and the heated and clarified air it contains, are tolerable conductors, and should, on that account, be avoided. It is never safe to sit near an open window, because a draught of moist air is a good conductor; hence we should close the windows on such occasions. In bed we are comparatively safe, for the feathers and blankets are bad conductors, and we are to a certain extent insured in such a situation.

Agricultural Premiums.

At a stated meeting of the Philadelphia Society for the Promotion of Agriculture, held on the 7th inst.—Pres't. Doctor Mease in the chair, 19 members present.

The proceedings of last meeting were read and ordered to be recorded.

On motion of C. S. Smith, the premium list for crops for the ensuing season was reconsidered, the quantity of ground and rate of premium for each reduced as follows:

For the best field of wheat, not less than three acres, $8.

For the best field of rye, not less than three acres, $8.

For the best field of oats, not less than three acres, $8.

For the best field of corn, not less than five acres, $8.

For the best lot of potatoes, not less than one acre, $5.

For the best lot of sugar beets, not less than half an acre, $5.

For the best lot of ruta baga, not less than half an acre, $5.

For the best lot of carrots, not less than quarter of an acre, $5.

For the best lot of parsnips, not less than quarter of an acre, $5.

For the second best crop of each of the above, a copy of Colman's Agricultural Journal will be awarded.

Several valuable books were presented to the Society, amongst which were Ellsworth's Reports, and the Transactions of the Russian Imperial Economical Society of St. Petersburg.

A box of Peruvian guano of superior quality, was presented for distribution by Mr. R. P. Lardner, being part of a lot obtained by Lieut. Lardner, on the coast of Peru.

Extract from the minutes.

A. Clement, *Rec. Sec'ry.*

Philadelphia, April 8, 1845.

Draining—Subsoil Ploughing.—Next in order to the drain succeeds the subsoil plough. The water being drawn off the land, it will bear to be deeper dug, or stirred or trenched. The crops which formerly were condemned to draw their sustenance from six or nine inches of soil, can now descend 18 or 20 inches. A double store of food is thus unlocked; and he who opens up, and, by draining, renders wholesome the surface of his fields to a double depth, does, in reality, add in effect to the available extent of his possessions. He makes them capable of yielding him larger returns, and for a longer period of years, without the risk of exhaustion. —*Edinburgh Review.*

Larne School in Ireland.

My next excursion was to the Agricultural School at Larne, where I had the pleasure of witnessing the examination of a class of boys in agricultural chemistry and in practical agriculture. This is not, properly speaking, an agricultural school, but a national school, where the common branches of education are taught; and there are connected with it a department or class of agricultural study, and a small piece of land, which the boys cultivate, and on which, in the way of experiment, the principles of agriculture, and its general practice, are, within a very limited extent, illustrated and tested. The examination was eminently successful, and creditable alike to the teacher and the pupils. It was from this establishment that a detachment of five pupils was sent for examination to the great meeting of the Agricultural Society of Scotland the last autumn, where their attainments created a great sensation, and produced an impression, on the subject of the importance of agricultural education, which is likely to lead to the adoption of some universal system on the subject.

I shall transcribe the account given of the occasion: "Five boys from the school at Larne, were introduced to the meeting, headed by their teacher. They seemed to belong to the better class of peasantry, being clad in homely garbs; and they appeared to be from twelve to fifteen years of age. They were examined, in the first instance, by the inspector of schools, in grammar, geography, and arithmetic; and scarcely a single question did they fail to answer correctly. They were then examined by an agricultural professor in the scientific branches, and by two practical farmers in the practical departments of agriculture. Their acquaintance with these was alike delightful and astonishing. They detailed the chemical constitution of the soil and the effect of manures, the land best fitted for green crops, the different kinds of grain, the dairy, and the system of rotation of crops. Many of these answers required considerable exercise of reflection; and as previous concert between themselves and the gentlemen who examined them was out of the question, their acquirements seemed to take the meeting by surprise; at the same time they afforded it the utmost satisfaction, as evincing how much could be done by a proper system of training."

I confess the establishment at Larne afforded me, in this respect, very high gratification. The agricultural studies are not made compulsory, but voluntary; and one hour per day, is devoted to agricultural labour. The Board of Education in Ireland have now under their control three thousand teachers; and it is proposed, wherever it may be deemed useful, to make agriculture a standard branch of common-school education. They already have seven agricultural training establishments; and it is in contemplation to have twenty-five, with which it is proposed shall be connected small model farms, so that everywhere, besides furnishing this most valuable instruction to the pupils of the schools, the farmers in the vicinity may be excited and instructed to improve their cultivation. Thus diffusive is the nature of all beneficence. A good deed, like a stone thrown into the water, is sure to agitate the whole mass. Its strongest effects will be felt where the blow is given; but the concentric circles are seen extending themselves on every side, and reach much farther than the eye can follow them. In the moral as well as physical world, the condition of mutual attraction and dependence is universal and indissoluble. We have reason to hope that no good seed is ever sown in vain, but will sooner or later germinate and yield its proper fruits.

These establishments do certainly the highest honour and credit to the intelligence and philanthropy of Ireland, and their beneficent effects must presently be seen in alleviating the indescribable amount of wretchedness under which this beautiful country and fine-spirited people have been so long crushed to the earth—a wretchedness which, to be understood, must be seen. —*Colman's Agricultural Tour.*

India Rubber for Stables.—This material is said to be unequalled by anything ever yet tried for this purpose. It prevents the lodging of stale matters and their consequent noxious exhalations. It requires little litter, and preserves the knees and other parts of the horse from injuries which are apt to be received in stone paved stables. The stables at Woolwich dock-yard, have been paved with this material for upwards of two years, and are superior in point of cleanliness, freedom from smell, and healthiness, to what they were previous to laying down the elastic pavement.—*Western Reserve Magazine.*

To preserve eggs, dip them in a strong solution of lime, thick whitewash; after letting them dry, pack them away in plaster of Paris. It is said the Germans practice this method successfully.

For the Farmers' Cabinet.

Potatoes—New Varieties.

There has for a couple of years past been so widely prevalent over our country a serious disease in the potatoe, and their price now in our market being 75 or 80 cents a bushel, I believe everything having a bearing on this matter, cannot fail to be interesting both to producers and consumers of this royal esculent. I therefore take the liberty to forward the enclosed for the Cabinet. I find it in a late number of the Massachusetts Ploughman. I do not know that there is anything in it that is new, but it may serve to keep all awake to the subject.

P. O.

Philadelphia.

The rot in the potatoe, which prevailed so extensively last fall, has caused a good deal of inquiry into the subject of new varieties of this root. Some farmers are of opinion, that on account of a mysterious something—some unknown law in the physiology of the potatoe, the vital principle of those kinds most subject to the rot has become exhausted, and that it is necessary to renew from the seed and obtain some other variety which shall take the place of the exhausted kind. We do not know how correct this opinion is. Without pretending to know more than other people upon the subject, or of deciding the question in controversy, we may say, that we are inclined to think that the theory which attributes the rot to the uncommonly hot weather in the fall, is as near right as any. But, nevertheless, the subject of renewing existing varieties from the seed, or of introducing new ones in the same way, is worthy of consideration by our farmers. We have been told that some farmer in Brewer, near Bangor, in Penobscot Co., did, some years ago, renew the Chenango or Mercer potatoe, as they are sometimes called, by sowing the seeds from the ball, and selecting those for planting which nearest resembled the original stock, and thereby derived much benefit, having a more healthy and productive kind.

We have been favoured with many specimens of seedling potatoes, by individuals who have amused themselves in producing new varieties. Gen. J. Robinson, of Waterville, has a very fine variety which he produced in this way. Dr. Leach, of Sangerville, sent us specimens of a large variety of his, selecting from numerous varieties, which he obtained from the seed. Rufus Moody, of Monmouth, has several varieties. Other farmers, in different sections of the state, have tried similar experiments with like results. The principal trouble is to obtain a kind that every body shall like so well as to cause a demand for them, and make them the *pets* of the market.

Among the thousands of varieties that have been produced by the different experimenters with seeds, but very few have been adopted as standards. The Chenangoes, which were produced by Mr. Gilkie, have had a great reputation. The Butmans, first raised by Mr. Butman, of Dixmont, have a good reputation in this vicinity, although they are not so productive as some. We have always done best with them on a moist soil. The Carters, which were first obtained by seed sown by a Mr. Carter, of New York, and which, if we mistake not, are also sometimes called White Farinas, are in good repute.

Mortality of Trees planted where certain Noxious Plants have grown.—It has been observed that oil paint on trellis, injures trees in contact with it—often destroys them. It appears that some trees destroy plants of which they are made the props—as, for instance, the Rhus and the Aylanthus, whose juices are capable of poisoning plants as well as animals.

It is known that vegetables during their vitality deposit in the earth where they have lived deleterious juices, which destroy plants put into their places. This fact is new enough to many who find very beautiful plants destroyed in succession in grounds where noxious plants had been growing.

It would be well to know the other suspected plants, besides those above mentioned.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Fifth Month, 1845.

The extract from the Edinburgh Review, on page 306, on the Importance of Manure, will bear two or three readings, not only by all those who make no pretensions to good farming, but it is quite likely by every one who feels the importance of manure to his land. "What merit, as a farmer, can that man claim who, though he annually lays five tons of guano or bones, or rape-dust upon his farm, yet allows what is equal to ten or twenty tons of the same, to run to waste from his farm-yard, in the form of liquid manure." Let every one look to his cow-yard next fall, and see if improvements may not be made around it, and in reference to the saving of the essential parts of his manure, which will be but little expensive, and relieve him from the purchase of costly foreign manures.

Every Man his own Farrier:—containing the causes, symptoms, and most approved methods of cure of the diseases of Horses; by Francis Clater, with notes and additions by J. S. Skinner.

This work, which has passed through twenty-eight editions in England, has just been issued from the press of Lea & Blanchard, of this city. While the excellent work of Youatt and Skinner on the Horse, which is much more historical and elaborate than this, should be on the shelf of every person who owns one of these noble animals, the *Farrier* should be found for daily reference in every stable, along with the curry comb and the brush. It may be obtained at this office, price 50 cents.

☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

A package of seeds—wheats and corn—is acknowledged from the Patent Office, Washington. They will be carefully distributed.

The first number of the *Western Reserve Magazine of Agriculture and Horticulture*, edited by F. R. Elliott, and published monthly in neat form, at Cleveland, Ohio, has been received. Considerable of the number is devoted to matters connected with the growing of fruits, and promises to be useful to our Western friends. We wish it success.

Our enterprising friend Hugh H. Bate, formerly of New Jersey, now of Portsmouth, Va., in the neighbourhood of Norfolk, was in our market on the 1st inst., with his fine well filled peas, at 37½ cents a half peck. The facilities of transportation enable the markets in this city, to anticipate by a fortnight at least, the early vegetable productions of our own vicinity.

The extensive sale of Improved Short-horned Durhams, advertised by E. P. Prentice, in the neighbourhood of Albany, on the 25th of next month, will not fail to draw the attention of cattle breeders. The owner, long known as an importer and breeder, boldly offers the whole of his stock for what it will bring, reserving only to himself the privilege of bidding openly on three or four animals, which shall first be designated. Persons who have contemplated sending to England for stock of this kind, will, in all probability, be equally well suited at this sale, as if they were their own importers, and at lower prices.

George S. Appleton, of this city, and D. Appleton, of New York, have lately published in a neat duodecimo, price one dollar, the *Farmer's and Emigrant's Hand Book*: being a full and complete Guide for the Farmer and the Emigrant. Comprising the clearing of forest and prairie land—gardening—farming generally—farriery—cookery—and the prevention and cure of diseases; with copious hints, recipes and tables, by Josiah T. Marshall.

As the title imports, the subjects treated of are various, and of very general interest, not only to the emigrant, but to those also who are stationary on farms in our own vicinity.

Journal of Prison Discipline and Philanthropy. This work is published quarterly under the direction of the *Philadelphia Society for the Alleviation of the miseries of public Prisons.* It is an octavo of 96 pages, and the subscription price $2 per annum. The object of the work may be readily gathered from the title, and from the high character of the Society who have charge of it. It is published from the office of the Farmers' Cabinet, where subscriptions and payments will be received. Money transmitted from a distance to Josiah Tatum, No. 50 N. Fourth street, Philadelphia, kindly franked by the post-master, will ensure the prompt return of the work as published. The second number is now published, containing a fine likeness of Elizabeth Fry.

Agency for the Purchase & Sale of

IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

March 15th, 1845.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	60
Complete sets of the FARMERS' CABINET, half-bound, 8 vols.	6 50
DOWNING'S Landscape Gardening,	3 50
DARLINGTON'S Flora Cestrica,	3 00
RELIQUIÆ BALDWINIANÆ,	1 00
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
BEVAN on the HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
JOHNSTON'S Agricultural Chemistry,	2 25
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

☞ We are prepared to bind books to order.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable* and *Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by D. O. PROUTY.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels—$5 for three barrels—$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. We were entirely unable last spring to supply the demand, though it was then but an experiment in this vicinity. The results on corn have been generally very satisfactory. Early applicants will be most certainly supplied. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. JOSIAH TATUM.

Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe-Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., March 15th. tf.

COLMAN'S AGRICULTURAL TOUR IN EUROPE.

It will not be forgotten that subscriptions to this work, are received at the office of the FARMERS' CABINET; where every farmer in the country will be heartily welcome as a subscriber to either the Cabinet or the Tour. Single Numbers will be sold. The subscription price of Colman's Tour, as we have repeatedly advertised, is $5; single Numbers fifty cents each. The third number has just come to hand, and we are gratified to be able to give an extract from it, which will be found on page 324. We have not found time to look through it, but the table of contents indicate an interesting one.

SALE OF FULL-BLOODED NORMAN HORSES.

The subscriber having relinquished Farming, will offer at Public Vendue, at his Farm in Moorestown, Burlington County, N. J., nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two imported Stallions, *Diligence* and *Buonaparte;* two imported Mares—three full-blooded Stud Colts, one, two and four years old—two full-blooded Fillies, three and four years old—two Fillies by *Diligence*, from a half-blood Canadian Mare, three and four years old, and one Filley four years old, by *Diligence*, from a well-bred English Mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation—which is believed to be the only one ever made to the United States—in all the principal Agricultural papers. In a few words, they are the *Canada* Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. *Diligence* has been a remarkably successful Stallion; he has been exhibited at the Fairs of the Pennsylvania and New York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the Colts of *Diligence* will be on the ground on the day of Sale, some of which, no doubt, may be purchased.

EDWARD HARRIS.

Moorestown, Burlington Co., N. J., March 15th, 1845.

The following premiums will be awarded by the Pennsylvania Horticultural Society, at an intermediate meeting on the 3rd of next month.

For the best Rocket Larkspurs, twelve to be exhibited, $2.

For the best Strawberries, two quarts, of a named variety to be exhibited, $2.

For the next best Strawberries, two quarts, of a named variety to be exhibited, $1.

For the best Cherries, three pounds, of a named variety to be exhibited, $2.

For the next best Cherries, three pounds of a named variety, to be exhibited, $1.

For the best Turnips, grown in the open ground, two dozen to be exhibited, $2.

At the stated meeting on the 17th.

For the best Garden Roses, twelve named varieties to be exhibited, $3.

For the next best Garden Roses, twelve named varieties to be exhibited, $2.

For the best Pinks, six named varieties to be exhibited, $3.

For the best American Seedling Pink, $2.

For the best Artichokes, six in number, $3.

For the best foreign Grapes, raised under glass, three bunches, $5.

For the next best foreign Grapes, raised under glass, three bunches, $3.

For the best named Cherries, three pounds, $2.

For the next best do. do. $1.

EXTENSIVE SALE OF

Improved Short-horned Cattle.

Having become over-stocked, I find myself under the necessity, for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my Entire Herd—such a herd of Improved Short-horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported, or the immediate descendants of those which were so, and of perfect pedigree. Those imported, were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by bye bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either of the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves. They shall all be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort, or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. This reservation is made that I may not get entirely out of the stock of some particular families which I highly esteem, and that could not probably be replaced.

A full catalogue will be prepared and inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock, A. M.

E. P. PRENTICE.

Mount Hope, near Albany, March 15th, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he may be authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to.

SANFORD HOWARD,
Cultivator Office, Albany, March 15th, 1845.

Particular attention is invited to the Sale of Edward Harris' Norman Horses, at Moorestown, New Jersey. It is very rarely that farmers of the United States can avail themselves of an opportunity for the purchase of such stock.

The quantity of rain which fell during the Fourth month, 1845, was a little more than two inches and a half. ..... 2.56 inches.

Penn. Hospital, 5th mo. 1st.

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THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the ninth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage: that is, one cent on each number within the state, or within one hundred miles of the place of publication out of the state,—and one cent and a half to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publisher under their frank—thus affording an opportunity to all who wish it, to order the work, and pay for it without expense of postage.

Joseph Rakestraw, Printer.